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School Food Service Programs and Commodity Market Support

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SCHOOL FOOD SERVICE PROGRAMS AND COMMODITY MARKET SUPPORT. By Paul E. Nelson; National Economics Division; Economic Research Service; U.S. Department of Agriculture. ERS-676.

ABSTRACT

Formal school food service programs add to the market for farm commodities. In school year 1977/78, sales of agricultural commodities were higher than they would have been without school feeding programs. This report presents food and commodity data under three alternative assumptions about the number of students who eat lunch. Under all assumptions, the total amount of commodities removed from the market without the programs was less than with them.

Keywords: Commodity support, school food service programs, Senate Resolution 90, fruits, vegetables, milk, grains, cattle, hogs, chickens.

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Note: Use of trade names does not constitute endorsement by the U.S. Department of Agriculture.

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SUMMARY

Formal school feeding programs support the agricultural economy by adding to the market for farm commodities. Sales of agricultural commodities in 1978 were higher than they would have been without school feeding programs. The farm sector benefits from food sales directly to individual schools and from Federal contributions to school food service programs.

Nationwide surveys of schools and school-aged persons provided the data needed to estimate the support that school food service programs give to the farm sector. Support was considered positive whenever more of a commodity was removed from the market with the food service programs than would be removed without them. Net support was negative when less of a commodity was removed from the market with the food service programs than without them.

This report presents the support data by food and by commodity under three situations. Each situation makes an assumption about the number of school-aged persons who would continue to eat lunch if the present formal school feeding operations were stopped. These assumptions range from all students continuing to eat lunch even without the programs to all free-lunch recipients no longer eating lunch if the programs were ended. This study shows that under all assumptions, the total amount of commodities removed from the market without the programs was less than with the programs.

In terms of live weights for cattle and hogs combined, from 335 to 793 million more pounds were removed from the market with school feeding operations in effect than would have been removed without them. The range was from 140 to 240 million pounds for chicken and turkey combined. In contrast, eggs received negative support--3 to 56 million more shell weight pounds would have been removed from the market if there were no school food service programs.

School food service operations provided positive support for most of the products in the milk and cheese group. Support was substantial for fluid milk used as a drink (from 1.6 to 2.3 billion pounds). Ice cream, ice milk, and sherbets had positive support ranging from 133.3 to 183.9 million pounds. However, sour cream and yogurt had negative support that ranged from 15 to 37 million more pounds that would have been removed from the market without the school feeding programs. Cheese also had negative support, from 266.8 million to 1.1 billion pounds.

Support was positive for domestic fruit, ranging from 69 to 533 million pounds. The combined net support for barley, corn, oats, rice, rye, and wheat ranged from a negative 31 million to a positive 243 million pounds. Net support for domestic vegetables ranged from 603 million to 1.3 billion pounds.

This report also presents regional and State distributions for basic farm level commodities. Regional support corresponds to each region's share of the nationwide commercial production for the 1977 and 1978 crop years. All regions were found to have positive support when all commodities were considered. However, for some individual commodities, some regions would have had more removed from the market without the school food service programs.

School Food Service Programs and Commodity Market Support

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INTRODUCTION

Programs using food surpluses to alleviate hunger grew rapidly during the depressed thirties. Between 1937-41, the school lunch program grew almost fourteenfold to serve about 5 million school children (10, p. 2). 1/ It was initially administered by USDA's Surplus Marketing Administration. Following World War II, the school lunch and supplementary milk programs both continued to grow, and summer feeding and school breakfast programs were added. By fiscal year 1979, the annual Federal cash contribution to participating schools amounted to slightly over $2 billion, and commodity contributions were $678.4 million (15).

Programs of this magnitude affect the size of business receipts and the gross national product (GNP) of our economy. Senate Resolution 90 (passed June 20, 1979) directs the Secretary of Agriculture to conduct a study of school nutrition programs, and Section 8 explicitly stipulates that this study include the contributions of the programs to the agricultural economy, including commodity-by-commodity and regional analyses (9, p. 3). To provide a basis for the Department's initial response to Section 8 of the Resolution, researchers from USDA's Economic Research Service (ERS) estimated the support provided by public and private school food services for each commodity in school year 1977/78. USDA's Food and Nutrition Service (FNS) has additional studies underway to refine the conversion factors used in translating the food products eaten at school into their farm commodity equivalents and to generate updated estimates of agricultural impacts using a newly collected data base which is current and directly applicable to school food service programs. Results of the FNS studies will be transmitted to the Congress in 1982, and should reflect ongoing changes in school enrollments, and the kinds and quantities of foods purchased by the Department and donated to the schools.

In this report, net support is positive whenever more of a commodity is removed from the market with the program than

1/ Underscored numbers in parentheses refer to items listed in the References section.

would be removed if there were no school food service programs. Net support is negative when less of a commodity is removed from the market with than without the programs.

PREVIOUS STUDIES

Three previous studies have looked at the effectiveness of the National School Lunch Program (NSLP) as an agricultural rather than a nutritional program. Southworth and Klayman (10) focused on the surplus foods distributed by the Surplus Marketing Administration between 1935-39. Commodity-by-commodity data were reported for the 10 leading foods and for broad food groups. The implicit assumption was that distributed surplus foods did not decrease the normal school purchases of either these or other foods; they were assumed to represent net support. The total distributed in 1941 amounted to about 56 million pounds, about 12 pounds per child (10, p. 2).

One of the other two studies adopted a sectoral approach. It focused on net changes in business receipts received sector by sector, and the change in GNP for the Nation (8). It used the U.S. Department of Commerce's national input-output model to determine the impact of both cash reimbursements and commodity grants. The impacts were net because the value of the cash grants and commodity purchases were deducted from the household sector containing tax paying households. These households' consumption function was adjusted accordingly. Cash plus commodity contributions resulted in a nationwide net increase in business receipts of $982.3 million, and in GNP of $447.7 million in fiscal year 1974. More specifically, the business receipts of the agricultural, forestry, and fisheries sector rose by a net $536.1 million (7, pp. 7 and 13).

The third study determined net support for specific commodities in Iowa (8). Records of purchases made by schools, average daily attendance, and the number of times an item appeared on school menus during the year were used in individual regression equations, one for each commodity. The regression equations were used to estimate the quantity of each commodity removed from the market through school purchases for school use for a specified number of lunch preparations.

Records of lunch preparations for students not participating in the school lunch program were developed using data collected from a sample of students who obtained their lunches from sources other than the school lunchroom. Thus, two equations were used for each commodity to estimate the amount of the commodity that would be removed from the market for the same number of lunch preparations, through the school lunch program or through removal by all other sources. The algebraic difference for each commodity showed whether the school lunch program provided positive, negative, or zero support. This Iowa commodity study was limited to the school years 1947 and 1948.

BASIC CONCEPTS

Senate Resolution 90, Section 8, emphasizes agricultural economy, commodity, and regional concepts. This report interprets agricultural economy to mean the farm economy. Consequently, the ultimate net impacts are expressed in terms of farm equivalent weights, the weight of the commodity as it leaves the farm. This means live weight for livestock. For fluid milk, it is the weight (avoirdupois) of whole milk. In the case of dry beans, including navy, it is the net weight as sacked (no shells). In contrast, the weight for green peas includes the pods.

The commodity concept is more difficult. The final impacts are expressed as farm equivalent weights. However, there also is interest in some products that are derived from the basic farm commodities. Thus we separately report net amounts of specified products (such as cheese, ice cream, ground beef, and apples) which moved through the school feeding operations. Some are combined-prepared foods which were purchased ready to eat such as pies, cakes, breads, goulash, and tacos.

Region is interpreted to mean the seven FNS regions, with data within regions reported at the State level. Thus, other regional definitions may be derived.

In spite of this flexibility, the regional concept has substantial data problems. A detailed regional analysis would trace each commodity from the farm to the point of final consumption. For example, apples grown by a Virginia farmer could be sold to a West Virginia apple juice processor. The West Virginia processor could sell some of the juice to the USDA, which in turn might make a widespread distribution over several States. The processor also might sell some of the juice to wholesalers in Denver who in turn might sell it to retail stores located throughout the Mountain Plains region. Thus, within that region some small schools which occasionally purchase at retail could serve both free USDA juice and purchased juice originating from the same processor. Tracing support of school feeding for farmers in the Mid-Atlantic region, where Virginia is located, would require both free distributions and purchases be taken into account. Product-by-product documentation, even if possible, would be too costly and time consuming.

A cruder approach was adopted based on the proposition that processors and wholesalers of fresh produce who service accounts as large as those of most school systems buy their farm commodity inputs primarily from commercial growers. Given the USDA's production data, the share each State has of the total commercial production for any given crop year may be determined. These State shares (proportions of total commercial farm production) may be applied to the national net support data derived in this study to disaggregate the total net support by region.

PRIMARY DATA BASES

Time and budget constraints dictated that ERS utilize existing data bases. The two primary bases used were the ERS study of food service in the Nation's schools and the Nationwide Food Consumption Survey (NFCS). The NFCS includes only respondents of school age, ages 5 to 17 for the fall term and ages 6 to 18 for the spring term.

The primary objective of the food service in the Nation's schools research was to identify and measure the quantity and value of foods received by schools, either by purchase or donation, for 1974/75 (19). In contrast, the NFCS tried to identify and measure the quantity and value of the food intakes of households and individuals for 1977/78 (12).

Adopting the results of these two independently conducted surveys presented several data management problems. For example, schools purchased both prepared-combined foods and the components needed to create a prepared-combined food. In addition, some school records clearly indicated the receipt of particular foods, but the school-aged respondents in the NFCS did not report having been served them. Another difficulty was selecting recipes to use when disaggregating a prepared-combined food into its components. This report's procedural appendix provides details on the data management decisions made and the procedures used. Special computations were made to avoid over estimation for major items such as bulk flour and quarters of beef.

Food Service in the Nation's Schools

Total food and service purchases made by schools maintaining feeding operations (hereafter identified as FS data), were estimated by Van Dress using food receipt records for 1974/75 from a nationwide sample of schools (19). Records covered an entire 12 months because food deliveries were made during the summer for fall use. Schools were selected from all elementary and secondary schools (grades 1 to 12) in the 50 States. The procedures used to identify and sample schools with operational feeding programs are described in the procedural appendix, along with a procedure used to age these data to 1977/78.

Consistency in Food Acquisition

The most extensive of school samples for any year cannot guarantee that the foods schools acquired will represent foods acquired in another year. However, some assessment of consistency of acquisition is possible by comparing the Kriesberg report (6) with the unaged 1974/75 data (19). Table 2 compares matching food categories. In the index computation, the data from (6) were adopted as the computational base.

Much of the difference can be reconciled by recognizing that by 1974/75 there were more students for which food had to be provided. Between 1962/63 and 1974/75 the average daily attendance rose by 25.3 index points (table 1).

Table 1--Total and per pupil quantity changes in specified foods acquired by all schools between SY 1962/63 and 1974/75

Kind of food 1/	Quantity indexes of change 2/	
	Total	Per pupil
	1962/63 = 100	
All foods	135.0	107.7
Bakery products	137.4	110.0
Eggs	59.8	45.0
Fats and oils	104.5	83.9
Flour and other cereals	114.7	91.4
Fruits and vegetables	127.3	101.6
Meat, poultry, and fish 3/	160.8	128.4
Milk and milk products	128.2	102.4
Potatoes (all kinds)	114.9	91.1
Sugar and sweets	126.0	100.0

1/ Some categories such as miscellaneous foods were excluded because the two data series did not match.

2/ Pounds per pupil for each data base were computed by dividing the total quantities for each food by 28.5 million average daily attendance in 1962/63, and by a corresponding 35.7 million in 1974/75. The increase in pupil numbers between the 2 school years amounted to an index of 125.3.

3/ Fish includes seafoods.

The per pupil series show an increase of 7.7 index points in the total amount of food provided. This may be associated partly with the distributional drift of students over the past decade. By 1974/75, there was a greater proportion of all pupils in grades 6 to 12, and fewer in the kindergarten through fifth grade than there was in 1962/63. Older pupils require larger servings than do pupils in the lower grades.

The increase in the per pupil bakery products statistic probably is associated with the decline in the flour and other cereals figure. By 1974/75, schools were baking fewer items onsite in school kitchens. Baked items increasingly have been provided either under contract with commercial bakers or by centralized school kitchens where some economies of scale are captured in the amounts of ingredients used.

The distributional drift of more students in the upper grades may partially account for the 28.4-index-point increase in the per pupil quantity of meats, poultry, and fish provided.

Data in table 1 support the concept that school food portfolios will vary year by year, and also suggest that there was a reasonable consistency for major food groups during the 1962/63 to 1974/75 period. Otherwise, by 1974/75 the per pupil index scores would have been substantially greater.

Nationwide Food Consumption Survey

The survey's basic sample was a multistate, stratified design covering all private households in the coterminous United States. It was supplemented with area probability samples of urban households in Alaska and all households in Hawaii. The basic sample consisted of four interpenetrating samples drawn and implemented in four separate quarters of data collection from April 1, 1977, through March 31, 1978. Data were collected for a single quarter for the Alaskan and Hawaiian samples.

In the basic sample, the person usually responsible for planning and preparing meals in the 7 days preceding the interview served as the respondent representing the entire household for the household questions. In addition, a subsample of household members was selected for 3 days of individual intake records. In the basic sample spring quarter, all household members were eligible to be sampled. The remaining basic sample quarters used all persons younger than 19 years and half of those 19 years or older. Since the intake records relevant for our research encompassed those of children ages 5 to 17 in the fall quarter and 6 to 18 inclusive in the winter and spring quarters, all household members of these ages were eligible for sampling. A more detailed description of the NFCS sample is reported in the procedural appendix.

FOODS REMOVED FROM THE MARKET NATIONWIDE

The FS data are for school year (SY) 1974/75 (19). These were aged to represent SY 1977/78 in order to use the NFCS data for school-aged respondents (12). The aging process consisted of dividing the 1974/75 average daily attendance into the corresponding 1977/78 statistic, and multiplying each item by that factor, 1.0078714. 2/

The FS data included between 600 and 700 food items either purchased or received by the schools in the form of donations. These were combined into 161 food items (table 2). 3/ Many foods, such as bakery products, were in ready-to-eat form when the schools received them.

These aged FS data (19) are listed under "Purchases and donations" in table 2. They represent the estimated quantities removed from the market nationwide during SY 1977/78. For example, in the milk and cheese group, school food service programs removed 2.9 billion pounds of fluid milk from the U.S. market directly by purchase and indirectly by donations. This poundage, however, is not net support because milk would still be obtained and consumed on schooldays by school-aged persons even without school food service operations.

2/ Change in average daily attendance was used instead of change in average rate of participation. If estimates are desired using the latter, multiply tables 2, 4-12, and app. tables 5-52 by 1.026.

3/ Net support for each FS item was computed prior to combining them. The combination procedure was to sum algebraically the support for the items to be combined and reported in table 2.

Table 2--Commodity support from school food service programs, 1977/78

Product name	School purchases and donations*	Net support		
		Context I	Context II	Context III
		1,000 pounds		
Milk and cheese:				
Fluid milk (all)	1/ 2,947,009	1,614,502	1,968,516	2,348,171
Sour creams and yogurt	1/ 2,144	-37,098	-26,673	-15,492
Prepared milkshake, ice cream, and custard mixes	22,600	2/	2/	2/
Imitation sour cream	25	2/	2/	2/
Ice cream, ice milk, and sherbets	1/ 225,272	133,284	157,723	183,932
Cheese (all)	1/ 860,533	-1,135,643	-713,311	-266,808
Imitation cheese	1/ 1,618	2/	2/	2/
Cheese (combined dishes)	3,262	2/	2/	2/
Fats, sweets and alcohol:				
Fatback, bacon, suet	4,086	-16,906	-11,329	-5,348
Baked sweet rolls, doughnuts, and danish	21,035	3,938	8,480	13,352
Cakes and cookies	19,236	-10,368	-2,502	+5,932
Cakes and cookies (unspecified)	45,640	2/	2/	2/
Fruit combined dishes (including fruit desserts)	106,315	85,364	90,930	96,899
Pies (except fruit and vegetable)	2,675	-1,422	-334	-834
Pie mixes (crust and shells)	777	2/	2/	2/
Cooked cereal and ready-to-eat	25,278	-98,424	-65,673	-30,551
Shortening and table spreads	125,477	46,393	67,395	89,920
Slaw/sandwich spreads	401	-821	-496	-148
Tartar sauce	795	656	693	732
Cooking salad oils	10,198	-4,325	-466	3,672
All other prepared salad dressing and related products	5,220	3,538	3,985	4,464
Mayonnaise	8,795	2/	2/	2/
Mayonnaise (in products)		246	564	905
Salad dressing	17,442	2/	2/	2/
Salad dressing (in products)		-35	+85	+214
Sugar (white granulated)	68,535	-53,524	-12,965	+30,471
Sugar, (brown and powdered)	26,477	2/	2/	2/
Jams, jellies, honey, molasses, syrup, fountain toppings, and preserves	8,207	-74,287	-52,370	-28,886

See footnotes at end of table.

Continued--

Table 2--Commodity support from school food service programs, 1977/78--Continued

Product name	School purchases and donations*	Net support		
		Context I	Context II	Context III
		1,000 pounds		
Fats, sweets and alcohol:				
Other desserts (including puddings, ices, and popsicles)	52,412	44,629	46,697	48,914
Cakes-cookie mixes and dessert sweets	6,924	2/	2/	2/
Sweet baking chocolate chips, chocolate syrup, candy, and icing mixes	12,194	2/	2/	2/
Beverage syrups	5,375	2/	2/	2/
Breads and cereals:				
Wheat flour	1/ 228,262	2/	2/	2/
Wheat breads and products, pizza, and stuffing	161,060	-232,851	-128,199	-15,967
French and vienna bread	5,409	3,757	4,196	4,667
Bread and bread products (other grains)	5,842	-65,012	-46,188	-26,000
Tortillas	13,056	2/	2/	2/
Crackers and wafers	16,470	-13,100	-5,244	3,181
Snacks	13,442	-97,843	-68,277	-36,570
Pastas	1/ 51,512	17,889	26,822	36,401
Other cereal grains	218	2/	2/	2/
Grits	1/ 522	-1,800	-1,183	-522
Corn products (including corn meal)	1/ 19,338	2/	2/	2/
Rice	1/ 22,621	12,112	14,904	17,898
Rice and pasta soup, concentrated	6,706	6,195	6,331	6,477
Rice and pasta soup, unconcentrated	3,306	-10,252	-6,650	-2,787
Bread type mixes	1,057	2/	2/	2/
Other meal	65	2/	2/	2/
Pancakes, jelly sandwiches, and waffles	1,524	-6,066	-4,050	-1,661

See footnotes at end of table.

Continued--

Table 2--Commodity support from school food service programs, 1977/78--Continued

Product name		School purchases and donations*	Net support		
			Context I	Context II	Context III
			1,000 pounds		
Meat, poultry, fish, and beans:					
Other beef	1/	48,651	-15,302	1,688	19,910
Beef prepared dishes		173,530	114,344	130,069	146,932
Ground beef	1/	730,068	342,241	445,277	555,776
All pork (except prepared dishes)	1/	164,860	-102,025	-32,297	42,482
Veal (including veal dishes)	1/	3,997	-648	586	1,909
Chicken (all types)	1/	188,655	106,257	128,148	151,625
Turkey	1/	113,889	24,049	47,917	73,514
Organ and variety meats		671	-260	-13	253
Meats (various) excluding beef and pork		11,787	-21,386	-12,573	-3,121
Italian sausage		118	2/	2/	2/
Fresh pork sausage	1/	20,498	3,117	7,734	12,687
Vienna pork sausage		624	3/	166	344
Chicken and turkey prepared dishes		1,481	480	756	1,031
Fish and seafood	1/	198,597	-136,699	-47,620	47,912
Eggs	1/	42,961	-43,176	-30,769	-17,741
Dried beans, peas, and lentils (including prepared dishes)		97,112	46,390	59,865	74,317
Pea, bean and lentil soups, single strength		428	-2,219	-1,516	-762
Nuts	1/	11,178	2/	2/	2/
Peanut butter and peanuts	1/	53,251	-190,240	-125,552	-56,176
Breaded beef patties		381	2/	2/	2/
Pea, and bean, and lentil soups, concentrated		598	2/	2/	2/
Cream soups: chicken and seafood, single strength		1,098	-10,222	-7,215	-3,989
Cream soups: chicken and seafood, concentrated		5,145	-7,690	-4,280	-623
Vegetable and fruit:					
Lima beans	1/	7,660	2,893	4,160	-5,518
Green peas	1/	60,823	55,333	56,792	58,356
Grapefruit	1/	6,834	-8,593	-4,494	-99
Other citrus	1/	9,465	-19,763	-11,998	-3,670
Oranges (fresh)	1/	52,018	-74,894	-41,177	-5,017
Citrus juices, concentrated	1/	90,992	11,371	32,524	55,209

See footnotes at end of table.

Continued--

Table 2--Commodity support from school food service programs, 1977/78--Continued

Product name		School purchases and donations*	Net support		
			Context I	Context II	Context III
			1,000 pounds		
Vegetable and fruit:					
Citrus juices, single strength		33,955	11,400	17,393	23,819
Apples	1/	181,274	-93,699	-20,646	57,699
All other fruit	1/	14,968	9,664	10,974	12,380
Bananas	1/	41,798	-89,219	-54,411	-17,082
Peaches	1/	116,880	96,893	102,203	107,898
Pears	1/	38,488	23,314	27,346	31,669
Pineapple	1/	41,777	27,094	30,995	35,178
Plums (including prunes)	1/	7,427	-255	1,786	3,975
Dried fruit	1/	182	48	83	122
Cantaloupe	1/	10,845	6,456	7,622	8,872
Grapes (including raisins)	1/	9,124	-45,959	-31,324	-15,630
Watermelon	1/	4,354	1,482	2,245	3,063
All berries	1/	627	2/	2/	2/
Cranberries	1/	28	20	22	24
Strawberries	1/	4,627	2,911	3,367	3,856
Other single strength fruit juices		10,751	-12,793	-6,538	170
White potatoes	1/	483,487	130,880	224,559	325,023
Sweetpotatoes	1/	29,631	23,689	25,267	26,960
Spinach	1/	17,136	15,848	16,190	16,557
Broccoli	1/	9,321	7,938	8,305	8,699
Carrots	1/	58,352	31,357	38,529	46,220
Pumpkin	1/	14,501	13,417	13,705	14,013
Squash	1/	2,499	-8,628	-5,671	-2,502
Tomatoes	1/	278,472	-70,547	22,179	121,621
Tomato juice, single strength		2,044	-5,538	-3,524	-1,364
Tomato soup, single strenghth		5,471	-4,707	-2,003	897
Tomato soup, concentrated		10,678	2/	2/	2/
Beets	1/	8,989	8,227	8,430	8,647
Cabbage (including kraut)	1/	82,456	71,578	74,468	77,568
Cauliflower	1/	1,762	-853	-158	587
Celery	1/	20,859	12,282	14,561	17,004
Cucumber	1/	14,927	-8,507	-2,281	4,396
Eggplant	1/	27	2/	2/	2/
Lettuce	1/	61,278	-33,500	-8,320	18,684
Other greens	1/	11,432	9,064	9,693	10,368
Mushrooms	1/	62	-29	-5	21
Onions and garlic	1/	42,690	-74,516	-43,377	-9,983

See footnotes at end of table.

Continued--

Table 2--Commodity support from school food service programs, 1977/78--Continued

Product name	School purchases and donations*	Net support		
		Context I	Context II	Context III
		1,000 pounds		
Vegetable and fruit:				
Parsley	1/ 357	2/	2/	2/
Hot peppers	1/ 1,877	1,689	1,739	1,792
Sweet grean pappers	1/ 8,779	-12,933	-7,164	-978
Radishes	1/ 1,469	535	783	1,049
Turnips and rutabagas	1/ 14,077	187	3,877	7,835
Vegetable juice	1/ 40	2/	2/	2/
Asparagus	1/ 222	2/	2/	2/
Green snap beans	1/ 103,593	95,386	97,566	99,905
Wax beans	1/ 2,928	2,493	2,609	2,732
Brussels sprouts	1/ 55	2/	2/	2/
Sweet corn	1/ 267,542	239,636	247,050	255,001
Okra	1/ 338	87	154	225
Pimento	1/ 1,308	2/	2/	2/
Stewed mixed vegetables	38,913	2/	2/	2/
Vegetable soup: single strength	2,513	2/	2/	2/
Vegetable soup, concentrated	2,617	2/	2/	2/
Vegetable base soups, single strength	1,008	-1,420	-775	-83
Vegetable base soups, concentrated	1,948	2/	2/	2/
Grape juice, concentrated	2,103	2/	2/	2/
Tomato juice, concentrated	473	2/	2/	2/
Minestrone soup, concentrated	538	2/	2/	2/
Shallots	1/ 6	-12	-7	-2
Other vegetables (including mixed)	2,022	2/	2/	2/
Spices and other foods:				
Artificial sweeteners and cream substitutes	5,472	4,613	4,841	5,086
Single-strength condiments and sauces	138,872	-4,818	33,357	74,297
Food coloring and flavoring (including extract)	4,222	4,199	4,205	4,212
All seasonings (including seeds, excluding salt)	6,190	2/	2/	2/

See footnotes at end of table.

Continued--

Table 2--Commodity support from school food service programs, 1977/78--Continued

Product name	School purchases and donations*	Net support		
		Context I	Context II	Context III
		1,000 pounds		
Spices and other foods:				
Salt	4/ 15,187	2/	2/	2/
Bouillon	310	-687	-422	-138
Other foods	1,623	623	889	1,174
Leaveners and thickners	23,518	2/	2/	2/
Olives	811	-8,817	-6,259	-3,516
Coffee beans and tea leaves	3,842	2,762	3,049	3,357
Instant coffee and tea	1,353	2/	2/	2/
Textured vegetable protein	5,500	2/	2/	2/
Condiments and sauces concentrated	1,082	2/	2/	2/
Carbonated and noncarbonated soft drinks	60,677	-99,873	-57,219	-11,475
Prepared and combination foods:				
Breaded pork fritters	5,875	2/	2/	2/
Lamb (including prepared dishes)	441	-3,487	-2,443	-1,324
Veal patties	499	2/	2/	2/
Pork prepared dishes	26,815	14,888	18,056	21,455
Fish/seafood prepared dishes	8,845	3,447	4,881	6,419
Prepared pasta dishes	39,466	26,683	30,079	33,721
Vegetable combination dishes	26,104	13,853	17,108	20,599
Chop Suey	908	331	484	649
Egg dishes	501	-863	-501	-112
Rice dishes prepared	1,206	279	525	789
Sausage and biscuits	8	2/	2/	2/
Barbeque pork	38	4	13	23
Peanut butter combination	2,017	-3,451	-1,998	-441
Pizza	45,289	35,435	38,045	40,861

*/ The 1974/75 figures used to compute these 1977/78 purchases and donations may be calculated by multiplying each total in this column by 0.9921286. The 1974/75 data base used to derive these school purchases and donations, from which the support results were estimated, is identical for this study and (19). Because of differences in the composition of reported food groups, and product form, possible direct comparisons between figures in this column, and those reported in (19) are limited. This table reports on a fresh (farm equivalent) basis when possible. Products purchased in canned, frozen, and dehydrated form, as well as fresh are reported and aggregated without conversions into commodity totals in (19), which may be obtained upon request.

1/ These figures are in farm equivalent weight.
2/ Respondent intake records were not sufficient to allocate by context.
3/ Less than 100 pounds.
4/ Includes only purchased salt. Excludes salt in canned products, and products produced under contract.

Simulation estimates were conducted to determine the range of SY 1977/78 support under three distinct conditions in the absence of school food service operations. The adjustment techniques used are described in the procedural appendix. Here we present the basic concept for each of the three conditions.

- Context I assumes that there were no formal school food service programs in SY 1977/78. All school-aged persons were assumed to eat a lunch, and their food selections were assumed identical to the selection patterns reported by the school-aged respondents in the NFCS who obtained their food from sources other than school feeding operations.

- Context II makes the same assumptions as Context I with respect to school food service programs and food selections. It differs in that it recognizes that a proportion of school-aged respondents do not eat lunch. This proportion was derived from the NFCS data.

- Context III makes the same assumptions as Contexts I and II with respect to school food service programs and food selections. It accepts the Context II assumption that a given proportion of school-aged persons do not eat lunch. It also assumes that the 38.8 percent of the students who in SY 1977/78 received a free lunch did not eat lunch when there were no school food service operations (15).

Under all contexts, total positive support is less than the poundages removed from the market by the school food service operations. In several instances, food preferences led to greater removal of some foods from the market, and hence greater support for those foods, without school food service operations. For example, schools removed 2.1 million pounds of yogurt and sour cream from the market. Under the three contexts, simulations suggest that from 15.5 to 37.1 million more pounds (measured in terms of farm equivalent milk) would have been removed if there had been no school food service programs (table 2). 4/ However, this negative support must be interpreted in view of the figures for all fluid milk. Farm equivalent weights show from 1.6 billion to 2.3 billion more pounds of milk removed because of the school food service programs than would have occurred without them. The nationwide bottom line of farm level milk support is presented in another table where all foods possible have been converted to farm level commodities, and where the ingredients of prepared-combined foods have been broken into component ingredients.

When a food is not part of a prepared-combined food, the poundages reported in table 2 have been converted to farm equivalent poundages and are indicated by a footnote. In contrast, proprietary products such as prepared milkshakes, ice cream, and custard mixes are not converted. The variety of such

4/ Farm equivalent milk is the amount of milk at farm level which was needed to make the pounds of product, in this case yogurt and sour cream.

products from one processor to another made accurate disaggregations impossible. Consequently, proprietary products, including oleomargarine and cooking and salad oils, are reported as is. The net support represents the net weight of these products in the form the schools received them. Thus, the net support for the commodities from which they are made is biased downward. The figures understate support because the weight of the ingredients in these proprietary products have not been disaggregated and added to the specific commodity's total. For example, the corn oil in margarine represents corn. The corn figure reported is biased by the exclusion of the amount of corn needed to make the corn oil in the margarine.

None of the three contexts used to derive simulated estimates of support precisely match reality, although Context III probably comes the closest. Context III reflects the fact that some school-aged persons do not eat lunch on school days for a variety of reasons including personal dieting and distaste for menu items. Context III also takes into account the economic status of free lunch persons by assuming that those persons will not eat if there is no school food service operation. Undoubtedly, some free lunchers will occasionally eat school food. However, Context III counterbalances this fact by including all reduced price lunch persons in the group who will continue to eat lunch each school day if there were no school food service operation. In reality, a substantial proportion of such persons would either reduce quantities and kinds of foods eaten, or eliminate lunch completely. Thus, reality appears to dwell somewhere between Contexts II and III. If a single estimate is desired, Context III appears the most realistic.

Milk and Cheese Group

School food service programs provided net support for most of the products in the milk and cheese group. Support was substantial for fluid milk, ice cream, ice milk, and sherbets. Net support for fluid milk ranged from 1.6 to 2.3 billion pounds, the former figure documented under Context I, and the latter under Context III. The corresponding support for ice cream, ice milk, and sherbets ranged from 133.3 to 183.9 million pounds.

Negative support for sour cream and yogurt was substantial, ranging from 15 million to 37 million more pounds which would have been removed from the market without school feeding operations. The negative support for cheese was even more substantial, ranging from 266.8 million pounds, Context III, to 1.1 billion pounds, Context I (table 2).

All figures in this group, with the exception of milkshakes, ice cream, custard mixes, and imitation sour cream and cheese are expressed in terms of farm level milk equivalent pounds. Even so, these figures do not provide total support at farm level. All of the milk and milk products used in prepared-combined, ready-to-eat foods must be added. The bottom line net support will show more fluid milk equivalent was removed from the market with school feeding operations than would have been removed

without them. Net support would have been higher except for the relatively high negative support for cheese.

The figures for foods with negative support are consistent with the proposition that foods commonly found on refreshment place menus apparently are favorites among school-aged persons who obtain their food from sources other than schools on school days. Cheese, sour cream, and yogurt are either foods or major ingredients of foods offered by refreshment places. Cheeseburgers and pizza may account for much of the cheese figure (table 2).

Fats, Sweets, and Alcohol Group

For white granulated sugar, the modest 31 million pounds of support under Context III and the -13 to -154 million pounds of negative support for Contexts I and II are consistent with the program's emphasis on serving nutritionally balanced meals. However, this estimated net support does not cover total sugar use. It excludes brown and powdered sugars, sugar in soft drink syrups, and soft drinks. Consequently, total net support is unknown, and the operating rules relating to soft drinks in 1977/78 imply that negative support is underestimated because more soft drinks would be consumed without than with formal school feeding programs.

Sugar was not reported in table 5 in the form of a farm level equivalent weight because there were no data for determining how much of the school sugar was beet, how much was cane, and how much was imported.

There were no school-aged respondent records for some types of cake, even though school records reported them. If doughnuts and gingerbread are treated as cakes, 11 cakes had no NFCS records. This meant that after recipes were used to disaggregate their components, there were no obviously accurate ways to allocate the ingredients when deriving estimates of net support.

The precise allocation will fall somewhere between these extremes. Because some cakes have negative adjustment factors for at least one context, while others have positive, it would be hazardous to assume that any of the unrecorded cakes were like cakes for which there are records. The positive adjustment factors were larger than the negative ones for cakes for which records exist so the decision was made to include the components from the 11 unrecorded cakes across the three contexts with a weight of 1.

The primary components of the cakes were flour, sugar, shortening, and eggs. This approximated 7 million pounds of wheat, 8 million pounds of sugar, 5 million pounds of eggs, and 3.5 million pounds of shortening for the 11 unrecorded cakes which are included in the farm level commodity totals.

Since sugar-coated, ready-to-eat cereals predominated, the ready-to-eat cereals were reported here rather than under the bread and cereals group. The only reason cereals appear in the

FS data is because they include some school breakfast figures. The greater cereal consumption by school-aged persons eating away from school suggests they may treat lunch as a form of brunch even on school days.

The negative support for slaw dressing and sandwich spreads is consistent with the refreshment place food item proposition presented in the milk and cheese group treatment.

The shortening and table spread item requires a technical comment. This figure includes butter, margarine, and solid vegetable shortenings. This aggregation was adopted because the NFCS school-aged respondent records did not enable a disaggregation between butter and margarine (12). No respondent of school age reported having had margarine. All reported butter. However, even NFCS adult respondents tended to use the term "butter" to include margarine.

Nonfruit pies were negatively supported for Contexts I and II, but positively for Context III. This documents the importance of the assumptions upon which the contexts rest. If enough school-aged persons cease to have lunch on school days, those having lunch and eating foods corresponding to the selections of school-aged persons obtaining food from other-than-school sources will not remove enough from the market to match the amount removed under school feeding operations.

Records for salad and cooking oils did not distinguish among those primarily derived from soybeans, cottonseed, peanuts, safflower, and sunflowerseeds. 5/ Consequently, there was no way to determine support for farm products from which these oils were derived. All that can be stated is that under Contexts I and II there would have been from 466,000 to 4.3 million pounds more removed from the market without the school food service operations than were removed with them. However, under Context III there would have been 3.7 million more pounds removed with, than without, food service programs.

Bread and Cereal Group

This food group reflects another complexity. The FS data include schools not participating in the National School Lunch Program, but which do provide food at lunchtime. A very small nationwide phone inquiry of such schools found that a relatively high proportion featured catered soup-sandwich operations. How much of the rice, pasta soups, and sandwiches reported by FS data were found in the records of schools with such operations is unknown (19). But without such schools in the sample, the negative support for some of the foods in this group would have been greater than that which is reported. It also is possible that if there were no nationwide school lunch program, many schools might shift toward soup-sandwich operations.

5/ USDA data show that USDA cooking oil donations consisted of peanut oil in 1974/75 and soybean oil in 1977/78. However, the kinds purchased by schools and by households where school-aged respondents resided are unknown.

Ten of the 17 foods in this group had positive support under Context I, and 11 under Context III. Eleven of the foods were prepared-combined, ready-to-eat foods, such as bread and tortillas. The remainder were ingredients such as flour, meals, and product mixes.

More specifically, wheat breads and snack foods would have had from 16 to 233 and from 37 to 98 million more pounds, respectively, removed from the market if there had been no school food service operations (table 2). The negative suport for single-strength rice/pasta soups must be interpreted in view of the positive support for concentrated soups of the same kinds. Schools reported a greater use of concentrated than of single-strength soups. School-aged respondents' records would not likely report that the soup was either single strength or reconstituted from a concentrated base. When the concentrate is reconstituted, the combination will yield positive support. This procedure was followed in disaggregating combined products to construct the farm level commodity table.

Meat, Poultry, Fish, and Bean Group

Of the 20 foods in this group, Context I had 11 with positive support, and Context III had 17. Most beef (particularly ground beef), chicken, and turkey provided substantial support. For example, ground beef support ranged from 342 to 556 million pounds, chicken from 106 to 152 million pounds, and turkey from 24 to 74 million pounds (table 2).

Organ meats and meats excluding beef and pork tended to have negative support. Meats excluding beef and pork would have had 3 to 21 million more pounds removed from the market without the present school food service operations (table 2).

Eggs also would receive greater support without the existing operations; the negative support ranged from 18 to 43 million pounds (table 2).

However, where the support at farm level is presented, what appears as negative support for a given food, often turns out to be positive support for the farm product. For example, for Context I (table 2) other beef had negative support of 15 million pounds. For farm commodity Context I, cattle and calves had positive support of 404 million pounds.

Vegetable and Fruit Group

Forty-six of 68 vegetable and fruit items had positive support under Context I and 55 under Context III. Some items could be classified under either of two food categories. For example, clam chowder, either New England or Manhattan, could have been placed under the meat, poultry, fish, and bean group. The decisive factor for including them in this group was the proportion of vegetables contained in each. Such foods were disaggregated and each ingredient allocated to the appropriate categories before the farm level commodity table was prepared.

Because some of the foods are prepared-combined items while others are just a fruit or a vegetable, a cross comparison is not possible. For example, tomatoes are reported in their farm

weight equivalent, whereas the tomatoes in tomato soup are reported as the net weight from the container, including other ingredients.

Fruits commonly appearing in brown bag lunches for most, if not the entire school year include apples, bananas, grapes (including raisins), and oranges. In each instance, although these products were liberally used by the school food service operations--181 million pounds of apples, 42 million pounds of bananas, 9 million pounds of grapes, and 52 million pounds of fresh oranges 6/--even greater poundages would have been removed without the present school food service operations. Negative support for bananas ranged from 17 to 89 million pounds, and it ranged from 5 to nearly 75 million pounds for oranges. In contrast, negative support for apples under Contexts I and II ranged from 20 to 94 million pounds, but apples had positive support of about 58 million pounds under Context III.

Fruits either not included or included less frequently in brown bags had positive support from the present school feeding operations. Fresh cranberries received positive support of from 20,000 to 24,000 pounds. When the prepared cranberry sauces and juices are disaggregated, farm level cranberry positive support is substantially greater.

Peaches and pears both received positive support by school food service operations. Support ranged from 97 to 108 million pounds for peaches, and from 23 to 32 million pounds for pears (table 2).

Although school food service operations removed 2.5 million pounds of all kinds of squash, 42.7 million pounds of onions/garlic, 8.8 million pounds of sweet green peppers, and 6,000 pounds of shallots, these vegetables had negative support under all three contexts.

Onions, garlic, shallots, and peppers are frequently ingredients of foods featured by refreshment places. The link here appears similar to that found for cheese.

Five vegetables had at least 50 million more pounds removed from the market with than without the present school food service programs for each of the three contexts. Specifically, the Context I to Context III ranges included cabbage, 72 to 78 million pounds; green peas, 64 to 67 million pounds; green snap beans, 95 to 100 million pounds; sweet corn, 240 to 255 millions pounds; and white potatoes, 131 to 325 million pounds. Fresh tomatoes under Contexts II and III had at least 20 million pounds more support with than without the food service operations, ranging from 22 to 122 million pounds. In contrast, Context I support was negative, 71 million more pounds being

6/ Note this figure includes only fresh oranges. The positive support for single-strength juice and concentrate means that in terms of fresh orange equivalents, school feeding operations had substantial positive support.

removed if there were no school food service. Context I assumes that all school-aged persons eat lunch on school days, and that they eat the same foods as did the NFCS school-aged respondents who obtained their food from other than school food service facilities (12).

The use of fresh tomatoes as an ingredient of, or complement to, refreshment place foods may partially explain this difference. However, in Context II when students who did not eat lunch are taken into account, and in Context III when the free lunch students are treated as not eating lunch, the support becomes positive. When prepared tomatoes are combined with fresh tomatoes in table 3, support is positive for each context.

Other vegetables receiving positive support of at least 10 million pounds under Context III were: sweetpotatoes, 27 million pounds; spinach, 17; pumpkin, 12; tomato soup concentrate, 11; celery, 17; lettuce, 19; and other greens, 10 million pounds (table 2).

Spices and Other Foods Group

Two items are particularly noteworthy from the spices and other foods group. Specifically, textured vegetable protein (TVP) received a positive support of about 5.5 million pounds. Carbonated and noncarbonated soft drinks received negative support ranging from 11 to 100 million pounds (table 2).

Bulk salt received by the schools totaled 15.2 million pounds (table 2). There were no data available for disaggregating this figure into the amounts contained in prepared foods and the amount directly added by students eating school prepared foods. Only 5 out of 11,731 school-aged NFCS respondent reported using salt. Consequently, there is no way to accurately compute net salt support.

TVP support indicates the extent to which textured vegetable protein was used by the schools as recently as 1974/75, as a complement to animal protein. While aged to 1977/78, the rate of adoption for TVP may mean the aged figures are too low for the amounts actually used in 1977/78.

The negative support for soft drinks reflects the fact that school feeding operations sell soft drinks primarily to older students, while students of all ages may obtain them from away-from-school sources. The negative support for soft drinks is in accord with the program's emphasis on serving nutritionally balanced meals.

Prepared-Combined Foods Group

This category includes foods which arrived at the school fully prepared and ready to eat. Positive support was found for 11 of 14 items. The exceptions were lamb dishes, egg dishes, and peanut butter combinations, such as sandwiches or peanut butter on celery sticks. The ranges of negative support were: lamb dishes, 1.3 to 3.5 millions pounds; egg dishes, 0.1 to 0.9 millions pounds; and peanut butter combinations, 0.4 to 3.5 million pounds (table 2).

Dishes with positive support of greater than 5 million pounds under Context III were: breaded pork fritters, 5.9; prepared pork dishes, 21; fish/seafood dishes, 6.4; pasta dishes, 34; and vegetable combinations, 21 million pounds. The variety and size of support of prepared-combined dishes reflects the growth of both central kitchen preparation within school operations and the contracts with private vendors who prepare food away from the schools.

Unmatched Food Items

Unmatched foods consist of proprietary items which could not be disaggregated, such as Postum and Tang; items for which there were few if any market transactions, such as venison and fresh water fish; and items for which from 1 to 12 servings out of a possible 5,528 were recorded (table 3). Of this last group, many items, while having neither records of acquisition by schools nor servings reported by school-aged respondents who obtained their food from school food service programs, could have been prepared from ingredients reported received by the schools (19). Flour, for example, was a major component of most of these foods. Flour was allocated among the items for which school experts indicated bulk flour primarily was used in preparation.

For the other foods, such as venison, the negative support was either irrelevant, or so minor that it did not affect the data when they were reported in thousands of pounds. Cheese dips'

Table 3--Unmatched miscellaneous and proprietary foods with negative support, 1977/78

Alfalfa sprouts	Pear nectar
Bran bread	Pineapple-grapefruit drink
Cashew butter	Postum
Chinese smoked sausage	Protein powder
Chorizos	Pumpkin seeds
Figs (raw)	Raw oats
Freshwater fish	Raspberry drink
Guacamole	Sourdough bread
High fiber bread	Soybean curd
Instant breakfasts	Tang
Liquid coffee concentrate	Tartar sauce (low calorie)
Mahi mahi	Tripe soup
Multi-grain bread	Venison
Saccharine	Whole wheat crackers

Foods which could have been prepared from ingredients received by the schools

Bacon sandwich	Hermits
Calah bread	Noodle pudding
Cheese dip	Oatmeal
Corn pone	Potato bread
Crepes	Vanilla ice cream pie

12,011 pounds did not show in the thousands of pounds of milk support reported.

NATIONWIDE FARM LEVEL SUPPORT

While sugar, salt, shortening, cooking oils, and fish are best represented by the figures reported in table 2, most of the items in table 2 have been combined into farm level or farm equivalent products, and are presented in table 4.

Grains and Oilseeds

Barley, corn, and rice had positive support under all contexts. Wheat was positive under Contexts II and III, but oats was positive only under Context III. Rye was negative under all contexts. The greatest positive support was received by corn, rice, and wheat. For corn, the support ranged from 25 to 32 million pounds, or 0.6 to 0.8 percent of total corn sold in 1977 (11, p. 34). Corresponding figures for rice were from 12 to 18 million pounds, or from 0.1 to 0.2 percent of the total domestic crop sold in 1977/78 (11, p. 19). Support for wheat ranged from a negative 31 to a positive 209.5 million pounds, or from 0.03 to 0.2 percent of the total domestic crop sold (11, p.5).

Oats was negative under Contexts I and II, the support ranging from 193,000 to 463,000 pounds or from 0.002 to 0.005 percent of the total pounds sold. Oats was positive under Context III, 151,000 pounds more being removed with than without the feeding operations, 0.002 percent (11, p. 38).

Rye's negative support ranged from 17 to 41 million pounds, or from 2.3 to 5.6 percent of the pounds sold domestically in 1977 and 1979 combined (11, p. 15).

Soybean products are reported in that form because there were no available conversions for soybeans to beans. Support ranged from 10.1 to 10.6 million pounds of products, about 0.01 percent of pounds sold (11, p.132).

School purchases and donations of peanut products amounted to a farm equivalent weight of 53.2 million pounds (table 2). Even so, peanuts received negative support ranging from 56 to 193 million pounds, or from 0.7 to 2.5 percent of the domestic crop sold in 1977 (table 4). The negative support stems from only 4.7 percent of the respondents obtaining their lunches from school food service programs reporting peanut products, whereas the corresponding proportion of the respondents who obtained their lunches from other sources was 15.1 percent (16).

Cattle and Hogs

From 404 to 705 million more live weight pounds of cattle (including calves) were removed from the market with school food service operations than would have been removed from the market without such operations. This amounts to from 1.0 to 1.7 percent of the total live weight of cattle and calves produced in 1977 (11, p. 308).

The corresponding support for hogs was negative for Context I but positive for Contexts II and III. Negative support for Context I was 69 million pounds, 0.4 percent of the 1977 live

Table 4--Farm commodity support provided by the Nations school food service programs, school year 1977/78

Commodity	Net support 1/		
	Context I	Context II	Context III
	1,000 pounds		
Cattle and hogs:			
Cattle (including calves)	404,509	549,400	704,517
Hogs	- 69,648	7,105	88,786
Dairy and poultry products:			
Chickens	115,414	139,389	165,722
Eggs	- 56,445	- 29,537	- 2,907
Milk	864,829	1,724,157	2,644,553
Turkeys	24,127	48,296	74,217
Fruits:			
Apples	- 92,414	17,511	61,789
Bananas	- 90,411	- 55,254	- 17,548
Cantaloupe	6,456	7,622	8,872
Cranberries	2,503	2,579	2,659
Grapefruit	- 8,593	- 4,494	- 988
Grapes (including raisins)	- 47,009	- 31,858	- 15,609
Oranges	56,771	174,443	300,618
Peaches	98,597	103,981	109,754
Pears	27,346	27,386	31,709
Pineapple	21,418	24,607	27,921
Plums (including prunes)	- 255	1,786	3,975
Strawberries	2,911	3,367	3,856
Watermelons	1,482	2,245	3,063
Grains and oilseeds:			
Barley	241	277	301
Corn	24,770	28,265	32,011
Oats	- 463	- 193	151
Peanuts	-193,314	-127,056	- 55,996
Rice	12,358	15,179	18,239
Rye	- 41,290	- 29,668	- 17,204
Soybean products 2/	10,121	10,349	10,594
Wheat	- 31,464	96,711	209,509

See footnotes at end of table.

Continued--

Table 4--Farm commodity support provided by the Nations school food service programs, school year 1977/78--Continued

Commodity	Net support 1/		
	Context I	Context II	Context III
	1,000 pounds		
Vegetables:			
Beets	8,227	8,430	8,647
Broccoli	7,938	8,305	8,699
Cabbage	73,514	76,727	80,083
Carrots	32,301	39,855	47,883
Cauliflower	- 853	- 158	587
Celery	12,307	16,396	20,156
Corn (sweet)	239,636	247,050	255,001
Cucumbers	- 8,736	- 2,253	4,700
Dry edible beans all kinds	9,419	18,299	27,823
Egg plant	27	27	27
Green beans--snap	95,340	97,534	99,887
Green peas	56,624	58,234	59,949
Green sweet peppers	- 12,933	- 7,164	- 978
Hot peppers	1,689	1,739	1,792
Lettuce	- 29.387	- 4,005	23,215
Lima beans	3,225	5,518	5,850
Mushrooms	- 1,524	- 978	- 393
Okra	118	184	256
Olives	- 8,816	- 6,258	- 3,515
Onions	- 70,727	- 38,405	- 3,757
Pimento	1,331	1,344	1,357
Pumpkin	14,374	14,907	15,479
Radishes	535	783	1,049
Spinach	17,607	18,031	18,486
Squash	- 8,627	- 5,671	- 2,501
Sweetpotatoes	23,689	25,267	26,960
Tomatoes	14,230	118,356	229,598
Turnips	151	3,841	7,799
Wax (yellow) beans	2,493	2.609	2,732
White potatoes	130,064	224,588	325,958

1/ The term "net" implies that quantities which would have been removed from the market if there had been no school food service programs in school year 1977/78 have been deducted from total amounts acquired by schools. See text for a discussion of the three contexts under which data are reported. All poundages are reported for the commodity in the form in which it customarily leaves the farm. For example, the poundages for meat are in live weight animal equivalents, that is, beef is reported in term of cattle weight, and pork, in live hog weights, etc.

2/ Textured vegetable protein and cream substitutes contain a high proportion of soybean derivatives. In this case, the net support is the net support poundage for the products, not the farm equivalent soybean weight.

weight produced. Positive support, Contexts II and III, ranged from 7 to 89 million pounds, or 0.04 to 0.5 percent of the total live weight produced in 1977 (11, p. 318).

Dairy and Poultry

Milk products for which net support could be estimated in aggregate provided farm equivalent milk support ranging from 575 million to 2,250 million pounds (table 2). Total commodity support reported in table 4 includes milk used as an ingredient and consequently the commodity support is greater than the product amount and the range is from 865 to 2,645 million pounds. This commodity support accounted for from 0.7 to 2.2 percent of the total milk utilized in 1977 (11, p. 372).

Positive support for chickens ranged from 106 to 152 million pounds, or from 0.8 to 1.2 percent of the 1977/1978 total commercial broiler production (11, p. 403).

Turkeys also received positive support because from 24 to 74 million more live weight pounds, or from 1.2 to 3.7 percent of the total 1977 production, were removed from the market with the school feeding programs than would have been removed without them (11, p. 408).

In contrast to chickens and turkeys, eggs received negative support ranging from 17.7 to 43.2 million pounds or from 0.2 to 0.5 percent of eggs sold in 1977 (11, p. 413). The percentages were computed by dividing the ounces of negative support by 2 ounces to obtain the number of eggs (schools typically use grade A large eggs). This total number of eggs was then divided by the total number of eggs sold of all sizes to obtain the proportion of total egg production cited.

Of the school-aged NFCS respondents, 0.18 percent of those who participated in school food service operations reported eggs served as an independent food; their counterparts who obtained their food from other sources reported a corresponding figure of 2.4 percent (8).

Fruits

For 8 of the 13 fruits, a greater amount was removed from the market with, than would have been removed without, school food service programs for all three contexts. Apples, cranberries, oranges, peaches, pears, and pineapple each received more than 10 million pounds of positive Context III support, and cantaloups almost 9 million. The rest received between 3 and 4 million (table 4).

Oranges received the greatest support, ranging from 57 to 301 million pounds or from 0.3 to 1.4 percent of 1977 production. Positive support for peaches ranged from 99 to 110 million pounds or from 3.3 to 3.7 percent of total 1977 production (11, p. 202). The corresponding support figures for pears ranged from 27 to 32 million pounds, or from 1.7 to 2.0 percent of 1977 production (11, p. 205).

Positive support for cranberries ranged from 2.5 to 2.7 million pounds, or from 1.2 to 1.3 percent of total 1977 production (11,

p. 205). Pineapple also received substantial support, ranging from 21 to 28 million pounds, or from 1.5 to 2.1 percent of Hawaii's total 1977 production.

In contrast, apples received negative support under Contexts I and II, but positive support under Context III. Negative support ranged from 18 to 92 million pounds, or from 0.3 to 1.4 percent of 1977 commercial production. Positive support under Context III amounted to 62 million pounds or 0.9 percent of total 1977 production (11, p. 205).

Negative support was associated more with fresh apples than with processed apples. Servings of fresh apples were reported by 14.1 percent of the NFCS school-age respondents who obtained their food from other than school food service operations. The corresponding figure for their school-age colleagues who participated in school food service programs was 4.1 percent. In contrast, the corresponding statistics for applesauce were 0.8 and 3.4 percent, respectively. Thus, when fresh apple equivalents of apples used in prepared-combined foods are combined with fresh apples, and when the numbers of students participating in school food service of Context III are assumed, the Context III support is positive.

Vegetables

Seventy percent of all vegetables received positive support for Context I, and 83 percent received support for Context III. Support ranged from 27,000 pounds for eggplant to 326 million pounds for white potatoes under Context III. The five vegetables receiving the greatest support under all contexts were: potatoes, ranging from 130 to 326 million pounds, or from 0.4 to 0.9 percent of the total 1977 farm commercial sales; sweet corn, 240 to 255 million pounds or 3.9 to 4.2 percent of the 1977 commercial crops sold for processing; green snap beans, from 95 to 100 million pounds or from 5.8 to 6.1 percent; cabbage, from 74 to 80 million pounds or 3.1 to 3.4 percent; and green peas for processing, from 65 to 69 million pounds or from 6.6 to 7.1 percent of the processed crop, shell weight included (11, pps. 182, 167, 156, 159, 175).

Carrots, spinach, and sweetpotatoes each had at least 15 million pounds of support under each context. Carrot support ranged from 32 to 48 million pounds, 1.6 to 2.4 percent of total 1977 production. The corresponding figures for spinach and sweetpotatoes, respectively, were 18 million pounds (4.6 percent), and from 24 to 27 million pounds (1.9 to 2.2 percent), (11, pp. 162, 185; 185).

Dry edible beans had positive support ranging from 9 to 28 million pounds. Because the identification of particular varieties of dry beans was fragmentary, it is not possible to compute a corresponding statistic for the proportion of total dry edible bean production.

The support for tomatoes ranged from 14 to 230 million pounds, or from 0.1 to 1.3 percent of total commercial 1977 output (11, p. 187). Positive support from processed tomatoes compensated for negative-to-low support for fresh tomatoes (tables 2 and 4).

Onions had negative support for all three contexts, ranging from 4 to 71 million pounds, or from 0.1 to 2.1 percent of total production (11, p. 175). This negative support for onions may be linked to the negative support noted above for other foods and components of refreshment place foods such as hamburgers and pizzas. For fresh mature onions, NFCS school-aged respondents who obtained food from other than school feeding operations had 1.6 percent servings of onions. The corresponding statistic for the school feeding operation group was 0.6 percent.

Lettuce had substantial negative support under Context I and almost as substantial positive support under Context III, while positive support under Context II was relatively modest. The 29-million-pound negative support under Context I represented 0.5 percent of 1977's total crop, while the positive support of 23 million represented 0.4 percent (11, p. 173). The variance in support is once more linked to the proportion of the two school-aged groups in the NFCS who chose lettuce, and to the assumptions of the numbers eating lunch under Contexts I and III. The group that ate away from school had 8.5 percent who chose lettuce, whereas the school feeding group had 5.5 percent. Lettuce choice also is linked to its use not only in salads, but as a garnish for hamburgers.

The comparatively modest support for pimento, about 1 million pounds, amounted to 4.3 percent of the fresh equivalent weight of the canned pack (11, p. 195, 5, p. 71). Pimento was used as a component of, or garnish for, many foods.

DONATED COMMODITIES

The reported net support for foods was derived for all schools without identifying the sources from which schools acquired them. Of the total 8.1 billion pounds acquired, 11.2 percent originated as USDA commodity donations, and accounted for 19.3 percent of the total value. Table 5 data quantify the corresponding proportions for specified foods and food groups.

USDA 1974/75 donations accounted for more than 65 percent of the total quantity acquired by all schools for cranberry sauce, orange juice concentrate, and peanut products, and for over 73.7 percent of their value. For peanut products, the donated items accounted for 93.2 percent of the total value. However, the total donations of each of these products measured in farm equivalent weight accounted for less than 3 percent of the average 1974/75 crop years' production, ranging from 0.1 percent of the farm weight peanuts sold to 2.6 percent of the cranberries harvested. Oranges used in making the concentrate approximated 1.7 percent of the mean 1974 and 1975 crop year production.

Support of such magnitude can be important. Historically, demand for food commodities at the farm level has been highly inelastic. A 1-percent change in the price at farm level will result in less than a 1-percent change in the quantity removed from the market. Conversely, a 1-percent change in the amount

Table 5--Donated foods as a proportion of total acquired food weights, and value 1974/75 1/

Acquired food	Percent of total food	
	Weight	Value
All food	11.2	19.3
Dairy products	3.6	12.0
Fats and oils	37.7	43.2
Fruits	9.2	11.4
Cranberry sauce	85.3	88.5
Peaches	30.5	26.5
Grains and other cereals	18.2	11.4
Juices and nectars	48.6	40.3
Orange (concentrate)	68.6	73.7
Orange (single strength)	23.5	26.3
Meats	53.9	53.0
Beef	64.1	65.4
Pork	22.1	19.5
Peanut products (butter and granules)	93.7	93.2
Poultry and eggs	62.2	61.3
Vegetables	12.6	7.8
Beans (dry)	70.7	70.5
Beans (green)	22.5	22.0
Sweetpotatoes	62.7	60.3
White potatoes	13.8	11.2

1/ Not adjusted for inventory movements.

removed from the market will be associated with a greater than 1-percent change in price.

For example, if a farm commodity has its own price elasticity equal to -0.2, a 1-percent change in the price will result in only a 0.2-percent change in the amount removed from the market. The amount removed from the market would be lowered by a price increase and raised by a price decrease. In contrast, a 1-percent change in the quantity removed from the market would result in a price change of 5 percent, everything else being held constant. Rarely does everything else remain constant in the real world, but the illustration shows why even a small amount removed from the market can have a perceptible price impact.

REGIONAL SUPPORT

Regional support for each commodity was derived by taking each State's proportion of nationwide production and applying it to the nationwide support figures in table 4. These individual State shares then were aggregated according to the seven FNS regions. Data for total regions are more representative than the figures for a single State, particularly for States with no more than 1,000 pounds reported. The rounding process meant that States with between 500 to 1,000 pounds were rounded upward to 1,000 pounds, whereas the States with 500 pounds or less were reported with a footnote indicating that they had less than

1,000 pounds of product support (table 9, and appendix tables 6, 20, 21, 22, 35, 41, 47, 52).

In the text, regional summaries are reported by commodity category. Individual commodities are presented in the appendix tables.

The nationwide support data presented in table 4 showed whether support was positive or negative for a specific commodity. Appendix tables presenting data at the State level present data in the same manner. However, for presenting a net total by kind of commodity by region, the positive and negative support within commodity groups must be combined algebraically to yield a net support poundage.

Cattle and Hogs

The product mix determined the extent to which particular regions received positive or negative support for cattle and hogs. Under Context I, the 23.9 million pounds of negative support for hogs in the Midwest (app. table 6), means that the Midwest would have had 23.9 million more pounds of livestock, in this case hogs, removed from the market without the present school food service operations, given the Context I assumptions.

For school-aged respondents, the NFCS data often showed that a much higher proportion of those not participating in school food service operations chose pork items than was the case for students getting their food from school food service facilities. These pork items included bologna sausage, other sausage not further specified, pork lunch meats not further specified, and ham lunch meats. The respective corresponding proportions of each group of students choosing the item were as follows, with the proportion for the nonschool food service operation respondents cited first: 14.6 to 1.3, 3.5 to 0.3, 5.6 to 0.4, and 1.9 to 0.2.

Context III, which takes into account both the school-aged persons who do not eat lunch and the assumption that the present free lunch recipients would not eat lunch, resulted in the Midwest region receiving 115 million pounds of positive livestock support, of which hogs accounted for 30 million pounds (table 6 and app. table 6). The Southwest and the Southeast also received positive livestock support, particularly under Context III, with 161 and 102 million pounds of livestock, respectively (table 6).

Appendix table 5 shows that all States had positive support for beef, hence, all regions. But the data for Illinois and Iowa (app. table 6) explain much of the negative support for hogs and thus for hogs and cattle when they are combined under Context I. Under Context I, for cattle and calves, Illinois had a positive 10.1 and Iowa 28.7 million pounds of support. Under Context III, cattle support was 17.6 and 50.0 million pounds, respectively.

Table 6--Regional support for cattle and hogs, 1977/78

Region	Context I	Context II	Context III
		1,000 pounds	
New England	2,717	3,855	5,073
Mid-Atlantic	14,348	22,162	30,518
Southeast	42,795	71,240	101,631
Midwest	24,687	68,363	114,951
Mountain-Plains	123,677	214,791	312,108
Southwest	88,904	123,830	161,206
West	37,733	52,264	67,816
Total	334,861	556,505	793,303

Eggs

More eggs would have been removed from the market without the present school food service operations than with them under all contexts. The Southeast, Midwest, and Western regions, respectively, would have removed from 0.9 to 16.6, from 0.5 to 9.8, and from 0.5 to 9.0 million more pounds of shell eggs from the market without the present school food service operations (table 7).

In the Southeast region, Georgia, Alabama, and Florida, respectively, would have had from 2.5 to 48, from 1.4 to 27.7, and from 1.3 to 25.4 million more pounds of shell eggs removed without than with the present school food service operations. In the Midwest, the corresponding figures for Indiana, Minnesota, and Ohio are from 1.4 to 14.8, from 1 to 18.6, and from 0.9 to 17.5 million pounds. In the Western region, California would have had from 0.4 to 7.2 million more pounds of shell eggs removed without than with the present school food service programs, given the assumptions of Contexts I and III (app. table 7).

Table 7--Regional support for eggs, 1977/78

Region	Context I	Context II	Context III
		1,000 pounds	
New England	-2,901	-1,565	-155
Mid-Atlantic	-5,926	-3,102	-306
Southeast	-16,596	-8,684	-855
Midwest	-9,765	-5,110	-503
Mountain-Plains	-5,418	-2,834	-278
Southwest	-6,717	-3,516	-345
West	-9,032	-4,726	-465
Total	-56,445	-29,537	-2,907

Fruits

The Southeast and Western regions each had more fruit removed from the market with than would have been removed without the present school feeding operations (table 8). In the Southeast and Western regions, Florida and California dominated, as was anticipated. Texas also had noteworthy amounts of positive support for oranges (app. table 13).

Table 8--Regional support for fruits, 1977/78

Region	Context I	Context II	Context III
		1,000 pounds	
New England	387	4,104	8,047
Mid-Atlantic	-19,728	4,999	31,500
Southeast	50,150	148,378	252,989
Midwest	-7,439	5,027	18,316
Mountain-Plains	-120	1,822	3,918
Southwest	4,531	9,551	14,785
West	49,292	127,870	210,663
Total	77,073	301,751	540,218

Hawaii, of course, received the support for pineapple. The West's strong support from peaches and pears, however, was counterbalanced to a large amount at the regional level by the negative support received for apples, grapes, and grapefruit, except for Context III, where Washington and Oregon had positive apple support (app. tables 8, 11, 12, 14, 15, 16).

Massachusetts, New Jersey, Wisconsin, Oregon, and Washington received all of the positive support for cranberries. Massachusetts and Wisconsin particularly benefited (app. table 10).

Grains

The Midwest, Mountain-Plains, Southwest, and Western regions received at least 30 million pounds of support for the combination of barley, corn, oats, rice, and wheat under Context III. Nationwide support of wheat and rice indicates why the Southwest and West were favored and wheat explains the Mountain-Plains (app. table 10). In the Southwest, from 4 to 44 million more pounds were removed from the market than would have occurred without the school food service operations, given the assumptions supporting the analytical comparisons. Corresponding figures for the Mountain-Plains and Western regions, respectively, were from a negative 31 to a positive 113 and from a negative 2 to a positive 35 million pounds (table 9).

Support in the Mid-Atlantic region ranged from almost a negative 2 to a positive 3 million pounds. In this region, rye and oats received negative support, while barley and wheat received positive support (app. tables 20, 22, 25, 27).

Table 9--Regional support for grains, 1977/78

Region	Context I	Context II	Context III
		1,000 pounds	
New England	-3	-1	1
Mid-Atlantic	-1,955	502	2,817
Southeast	835	451	4,476
Midwest	-988	22,681	44,311
Mountain-Plains	-30,580	44,718	112,568
Southwest	3,856	24,885	43,934
West	-2,463	17,335	34,894
Total	-31,298	110,571	243,001

Wheat, rice, and corn (particularly wheat and rice), received much greater support with than without the present school food service operations in terms of pounds removed from the market. In the Southeast, Mississippi, and in the Southwest, Arkansas, Texas, and Louisiana benefited from the positive support given rice (app. table 24). In the case of wheat, in the Southeast, Kentucky and Tennessee gained most. In the Southwest, the gainers were Oklahoma and Texas (app. table 27).

Milk

While all regions received positive support under Context III, the extent ranged from New England's 93.9 million pounds to the Midwest's 1 billion pounds. Other regions with noteworthy Context III support were Mid-Atlantic, 470.7; Western, 371.6, and Mountain-Plains, 296.2 million pounds (table 10).

Wisconsin, in the Midwest, New York in the Mid-Atlantic, and California in the Western region exceeded all others in the

Table 10--Regional support for milk, 1977/78

Region	Context I	Context II	Context III
		1,000 pounds	
New England	30,701	61,208	93,882
Mid-Atlantic	153,939	306,900	470,730
Southeast	76,969	153,451	235,363
Midwest	333,825	665,525	1,020,796
Mountain-Plains	96,862	193,106	296,189
Southwest	45,835	91,379	140,161
Western	126,698	252,588	371,558
Total	864,829	1,724,157	2,644,553

amount of milk support received (app. table 50). Respectively, Context III support amounted to 542.1, 214.2, and 248.6 million pounds. Minnesota also was high with 193.1 million pounds.

Oilseeds

Soybean products of TVP and cream substitutes have not been converted to a soybean equivalent basis because of data problems, so only peanuts will be treated in terms of their regional distribution.

When interpreting these figures it must be recalled that these data exclude the farm equivalent weight of peanuts used to produce peanut cooking oil and peanut oils used in any solid vegetable shortening like oleomargarine. Thus, the negative support figures in table 11 are biased according to what these products would have yielded as farm equivalent peanuts.

Table 11--Regional support for peanuts, 1977/78

Region	Context I	Context II	Context III
		1,000 pounds	
New England	--	--	--
Mid-Atlantic	-15,272	-10,037	-4,424
Southeast	-144,018	-94,658	-41,717
Midwest	--	--	--
Mountain-Plains	--	--	--
Southwest	-34,024	-22,361	-9,855
Western	--	--	--
Total	-193,314	-127,056	-55,996

-- = Peanuts not commercially produced in region.

The Southeast, and particularly Georgia, would have had more peanuts removed from the market (from 23 to 81 million pounds), without rather than with the present school food service operations, given the analytical assumptions. In the Southwest, Texas would have had the greatest amount removed with negative support ranging from 6 to 21 million pounds (app. table 23).

Poultry

Farm live equivalent weights were derived for chicken and turkey products. The nationwide support was allocated according to each region's share. The three heaviest commercial production regions which had more removed from the market than other regions were the Mid-Atlantic, Southeast, and Southwest. Their support ranged, respectively, from 22 to 35; from 59 to 92; and from 31 to 51 million pounds. New England received the least support, from 3 to 5 million pounds (table 12).

Arkansas was first both nationwide and within the Southwest in the amount of positive support received for broiler chickens, about 26 million pounds under Context III. Georgia's

Table 12--Regional support for chickens and turkeys, 1977/78

Region	Context I	Context II	Context III
		1,000 pounds	
New England	3,170	3,864	4,624
Mid-Atlantic	21,974	28,321	35,196
Southeast	59,642	75,076	91,937
Midwest	8,297	14,940	22,075
Mountain-Plains	5,958	11,068	16,555
Southwest	31,451	40,883	51,146
West	9,049	13,533	18,406
Total	139,541	187,685	239,939

corresponding figure was about 23 million pounds. Georgia was first in the Southeast region and Alabama was second with support of about 20 million pounds. Maryland was fifth nationwide and first in the Mid-Atlantic with support of over 10 million pounds. In New England, the region with the smallest commercial operation and support, Maine was first with about 4 million pounds, also under Context III (app. tables 51, 52).

Minnesota was first for turkeys under Context III, both nationwide and within the Midwest, with a positive support exceeding 10 million pounds. California and North Carolina both had over 9 million pounds, and California's was greater than North Carolina's by about 300,000 pounds. In New England, New Hampshire had the greatest positive support, about 82,000 pounds.

Vegetables

From 603 to 1,263 million more pounds of domestic vegetables were removed from the market with the present school feeding operations, than would have been removed without them (table 4). Domestic support for which there were adequate production figures for estimating regional and State distributions totaled from 610 to 1,262 million pounds (table 13). A region's product mix in part determined the region's net support. The Southeast and Southwest regions received substantial support but they did not fare as well as the Mid-Atlantic, Midwest, and Western regions. Differences were primarily associated with the negative support each received from onions, sweet peppers, and cucumbers. In the States and regions where these crops were relatively important, total net support was not as great as total vegetable production might suggest.

The New England region's greatest support came from white potatoes with support of about 30 million pounds under Context III, and from green peas with 1 million pounds. Within the Northeast region, Maine was the sole recipient of green pea support, and the primary recipient for potatoes. Massachussetts also received support for potatoes (app. tables 38, 49).

Table 13--Regional support for vegetables, 1977/78 1/

Region	Context I	Context II	Context III
		1,000 pounds	
New England	12,798	20,864	29,508
Mid-Atlantic	69,122	91,717	113,363
Southeast	44,284	63,062	83,010
Midwest	251,785	294,910	340,648
Mountain-Plains	19,772	37,314	56,123
Southwest	18,661	33,517	47,596
Western	193,454	385,907	592,008
Total	609,876	926,291	1,262,256

1/ This table excludes olives, eggplant, hot peppers, mushrooms, okra, pimento, and radishes. Olives do not represent a primary commercial domestic crop. The other crops do not have geographic production data sufficient to allocate them by region. Total national support ranged from 603 to 1,263 million pounds. Under Context I, the net support for olives, eggplant, hot peppers, mushrooms, okra, pimento, and radishes was a negative 6,640 million pounds, whereas under Context III, it was a positive 1,049 million pounds.

In the Mid-Atlantic region under Context III, cabbage and white potatoes each received about 23 million pounds of support, and green snap beans about 21 million. Within the region, New York was the dominant recipient in each instance, receiving cabbage support of about 16 million pounds, snap bean support of about 14 million pounds, and potato support of about 11 million pounds (app. tables 30, 37, 49).

In the Southeast under Context III, sweetpotatoes and green snap beans received the greatest support, with about 15 and 13 million pounds, respectively. North Carolina by far received the greatest support from sweetpotatoes, almost 10 million pounds. Florida received about 7 million pounds of snap bean support (app. tables 37, 45).

Sweet corn provided the greatest support in the Midwest, about 154 million pounds under Context III. Minnesota received the greatest support with about 68 million, and Wisconsin was second with about 58 million pounds (app. table 34). White potatoes and dry edible beans had the greatest support in the Mountain-Plains region. The former received about 37 and the latter about 8 million pounds, Context III. For potatoes, North Dakota received about 20 million and Colorado about 10 million pounds of support (app. tables 49, 36).

Cabbage and sweetpotatoes received the greatest support among the Southwest's vegetable crops, about 15 million pounds for

each, Context III, and Oklahoma accounted for all of it (app. table 30).

In the Western region under Context III, white potatoes and tomatoes received the greatest support, each about 180 million pounds, among that region's vegetable crops. Idaho's share amounted to about 84 million, and Washington's to about 46 million pounds of the potato crop support. California essentially accounted for all of the tomato crop support received (app. tables 49, 46).

CONCLUSIONS

School food service operations provided farmers substantially greater net commodity support than they would have received without the programs. Commodities receiving the greatest net support included: cattle, chickens, milk, oranges, peaches, sweet corn, tomatoes, wheat, and white potatoes. Eggs, grapes, peanuts, and rye were among the few domestically produced commodities for which more would have been removed from the market if there had been no formal school food service operations.

Each of the seven FNS regions received greater net commodity support with than they would have without formal school food service activities. Of the seven regions, the three receiving the greatest net support were the Midwest, Mid-Atlantic, and West. The Midwest and Mid-Atlantic received support primarily from milk, and the West from vegetables.

This net support indicates that more nutrients were made available with formal school food service operations than would have been without the programs. Reduced price and free lunch students particularly were provided more food selections, and consequently more sources for obtaining basic nutrients, than they would have received otherwise.

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PROCEDURAL APPENDIX

Materials presented in this appendix include sampling, other data treatment procedures, and the identification of assumptions critical to understanding reported findings.

Food Service in the Nation's Schools

School records of food purchases and donations received provided the statistical base for estimating the total amount of food flowing through school food service programs. Records were for SY 1974/75. However, these data were aged to represent SY 1977/78 for determining the net support given to the agricultural economy.

Food Service Sample

The universe sampled was composed of all elementary and secondary schools (schools having students in grades 1-12) in the 50 States. It was divided into two distinct strata--public and private schools. Each stratum in turn was divided into subsets composed of elementary and secondary schools.

This universe was distributed according to five geographic regions. Because the schools maintaining food service programs were unknown prior to the initial sampling of schools from the universe, it was necessary to draw a larger sample than otherwise would have been required. The over sampling also took into account the expectation that not all schools providing food service would be willing to participate in the study.

Primary restrictions placed on this sampling procedure were that it should contain at least 800 public and 200 private schools with lunch programs, and that the private school stratum within each region should include at least 20 elementary schools and 20 secondary schools with food service programs.

The survey aimed to identify the total quantity and value of foods used in school food service programs. Food utilization at a school should correlate with the number of students. Therefore, subject to the cited restrictions, the sample was drawn with probabilities proportionate to the number of enrolled students.

Information from an earlier 1972 NSLP survey (conducted by USDA's Statistical Reporting Service for FNS) was used to estimate the proportion of private schools serving food in each type of school in each region. An individual sample size (n_{2jk}) for each type of school in each region was then obtained by dividing this proportion into 20. To allow both for errors in the estimated proportion and to compensate for possible refusals, the indicated sample size was multiplied by 1.2 to arrive at the number of schools to be screened for possible enumeration.

The public sector was not restricted as to the number of samples in any substratum. Therefore, the most efficient method of sampling was one which assigned samples in proportion to the number of students in schools which maintained food service. Assuming that the presence of food service is independent of the number of students in the school, this was accomplished by selecting the screening samples with probabilities proportionate

to the number of students enrolled. The total number of screening samples (n) selected was derived as:

$$n = (800)\ (1.1)\ \sum_{j,k} \frac{\{M_{1jk}\}}{P_{1jk}} \Big/ \sum_{j,k} M_{1jk}$$

800 was the desired minimum number of qualifying schools serving food.

1.1 was the factor to allow for errors in estimated proportions of schools serving food.

M_{1jk} was the total number of students enrolled in public schools in type of school j, region k, and

P_{1jk} was the estimated proportion of schools serving food in type of school j, region k.

Then the number of screening samples selected for each type of school and region was computed as:

$$n_{1jk} = n\ (M_{1jk}) \Big/ \left(\sum_{j,k} M_{1jk}\right)$$

The screening samples were selected from each type of school and region cell as follows:

(1) The sampling interval(s); $s_{ijk} = M_{ijk}/n_{ijk}$ were computed.

(2) A random number (r) which was less than or equal to (s) was selected.

(3) With the schools for that cell in some natural order, here sorted by enrollment, the enrollments were cumulated until the total reached or passed (r), which became the first school.

(4) A new (r) was computed, r = r+s.

(5) Cumulating enrollments were continued until the new (r) was reached. This became the next sample school.

(6) Steps (4) and (5) were repeated until all screening samples for that cell were selected.

An expansion factor (x) was computed for each selected screening sample.

This factor was computed as:

$$x = \frac{\text{sampling interval for that cell}}{\text{enrollment for that school}} = s_{ijk} \Big/ M_{ijk}$$

These expansion factors were used when computing cell and U.S. totals and variances.

Nationwide Food Consumption Survey

The national estimates of the quantity of food removed from the market by school food service programs provided only half of the data needed to estimate net support given the agricultural economy. Unless students who do not obtain food through school sources (feeding programs) ate nothing, the net support equals amounts removed by the schools minus the quantities of food which would be eaten by school-aged persons if there were no school lunch program.

The Nationwide Food Consumption Survey covered the 1977/78 period and provided the information needed to derive the relevant adjustment factors for estimating net support. The portion used was the diary responses of school-aged children. Responses used included 178 school days between September and June.

NFCS Sample

The NFCS used seven independent and supplemental surveys of noninstitutional households to collect information. Our adjustment factors were derived from individual intake records of school-aged respondents who were members of households of the basic sample.

The basic sample included only households within the coterminous 48 States. The special, independent samples for Alaska and Hawaii were not merged with the basic sample. The supplemental Alaskan survey included only urban households. The supplemental Hawaiian survey used a probability sample covering the entire State. Thus it included a much greater proportion of Oriental households than would have been included in a nationwide sampling of households covering all 50 States.

The sampling procedure described above for the food service in the Nation's schools study (FS) gave schools in Alaska and Hawaii the same opportunity for selection as it did schools of identical characteristics in the 48 coterminous States. The vagaries of sample selection resulted in two Alaskan and six Hawaiian schools participating. Alaskan schools accounted for 0.001 percent of the schools in the sample, and Hawaiian for 0.004 percent.

Because the FS sample included Alaskan and Hawaiian schools, it does not identically match the scope of the NFCS basic sample. However, this discrepancy in sampling scope appears to have very little influence. Thus, no adjustments have been made. It is possible that the number of servings of particular foods, such as pineapple, reported in the NFCS basic sample may be fewer than if that sample had included Hawaiian schools. However, the critical relationship is between the number of servings reported by respondents who obtained their food through school feeding operations, and respondents who obtained their food from other sources. This association may not be any different in Hawaii than the 48 States.

Data collection for the basic sample continued from April 1, 1977, through March 31, 1978. Across the four quarters, 14,958 interviews were completed for the basic sample of households. The basic sample design consisted of three levels of stratification. The Standard Metropolitan Statistical Areas (SMSAs) were divided into areas composed of the central city and the suburban residual of the SMSA, and nonmetropolitan areas. Actual stratification was accomplished by classifying every private household in the coterminous United States into one of nine Census divisions. Within each division, parts of the metropolitan areas--central cities or suburban--were ordered geographically and/or by size. In the nonmetropolitan areas, States were ordered geographically; within each State, groups of economic areas were ordered. These arrays provided a sampling frame, such that 114 strata of approximately equal size could be formed and identified by legal or Census boundaries. The average stratum size was about 600,000 housing units.

The central city portion of the SMSAs was formed into 38 strata. First, cities, called primary sampling units (PSUs), were assigned measures of size based on 1970 census housing counts. One PSU was randomly selected from each of the 38 strata. Its chance of being selected was proportional to the ratio of its 1970 housing units to the total number of housing units in its stratum.

The suburban residuals of each of the 234 metropolitan areas were grouped in 39 strata. Counties in the same geographic area were grouped until a stratum size of about 600,000 housing units was obtained. Primary sampling units of a metropolitan county, excluding the central city, were formed into strata. The size of PSU is the number of 1970 housing units in the county, or the county minus the central city. Again, random procedures were used to select one PSU from each stratum proportional to the 1970 housing units in the stratum. Thus, 39 metropolitan counties were identified and selected.

The nonmetropolitan U.S. counties were grouped into 37 strata. Strata were created by putting together adjacent nonmetropolitan counties. Each stratum was composed of about 600,000 housing units. In the nonmetropolitan groupings, the PSU consists of one or more nonmetropolitan counties. A table of random numbers was used to select 37 PSUs, one from each stratum. Again, the selection of a unit was proportional to the total number of housing units it contained divided by the size of the stratum from which it was selected.

New York, Chicago, and Los Angeles county were selected with certainty. Each was defined as two PSUs. Sampling from these three strata (6 PSUs) was done directly without further stratification by area segments.

Within PSUs, small clusters of housing units called "area segments" were identified. Segments usually consist of one or more city blocks in urban areas, and part of a Census Enumeration District (ED) elsewhere. These area segments became

the listing units from which the final sample of housing units was selected.

The precise number of segments selected from each PSU was dependent on the overall sampling rate for segment selection, the probability of selection of the PSU, and the number of housing units in the PSU. This figure was obtained by solving the following equation for n_i:

$$ni = \frac{KN_i}{P_i}$$

Where n_i = the number of housing units in the PSU

K = the overall sampling rate for segment selection
P_i = probability of selection of the PSU

An array of all blocks in the PSU was made whenever Census block data were available, and area segments were selected from this array. In the central city stratum, the array encompassed all blocks within the central city. In the suburban and residual SMSA areas, this array included all blocks in the county. In PSUs where Census had published no block information, area segments were chosen from the ED information for the complete PSU.

Prior to conducting interviews, an accurate count and description of all housing units was made for all units within the sample segments. This prelisting was conducted in the field. Of the 2,550 sampled segments, 2,531 were prelisted. The field observations revealed that 19 segments contained no housing units.

The sampling ratio within segments was determined by a formula that took into account the total number of interviews desired, 15,000; the estimated occupancy rate, 93 percent; the estimated completion rate; and the increase in the number of housing units between 1970 and 1977. The product of these data determined the number of sample dwellings that were selected, on average, from each segment.

Four independent interpenetrating samples were implemented in four consecutive quarters of data collection in order to provide seasonal information. Throughout the year each segment was updated on the day of interview. Interviewers using the "half-open interval method" accomplished this by drawing into the sample all households not on the listing sheet that directly followed a sample household, up to but not including the next listed household. For the household portion of the interview, the eligible respondent was the person who usually planned and prepared meals in the 7 days before the interview.

Individual Intake Records

In addition, a subsample of household members was selected to complete 3-day individual intake records. In all quarters, all persons younger than 19 years of age were sampled. Of this group, the responses by persons ages 5 to 17 were used for the period Sept. 6 through Dec. 23, including only school days. Responses by persons ages 6 to 18 were used for school days for Jan. 2 through June 3.

Individual intake records were classified in three categories: records reporting food obtained from school facilities; records reporting food from all other sources; and records showing no food intake at noon. For the school year, 52.1 percent of the records reported food obtained from school facilities, 35.1 percent reported food obtained from all other sources, and 12.8 percent reported no food obtained.

Each of the respondents reported intake information for 3 days. The first day represented intake information for the day before the interview. Day two was the day of the interview, and day three was the day following the interview. A systematic sample of all occupied households where NFCS interviews were not completed was drawn, once the data collection was completed.

A model for weighting was developed to adjust each primary sampling unit for nonresponse and to equalize response across the four quarters of data collection. To adjust the basic sample for nonresponse, the number of completed interviews in each PSU was weighted proportionate to the total number of occupied housing units in the PSU. To equalize response across the four quarters of data collection, a constant was applied to each PSU weight such that the aggregate of all sample weights equaled the average number of interviews planned per quarter. In the basic sample, weights are aggregated to 3,740.

Aging Food Service Data

Data collected for the food service study were for school year 1974/75. Data for the NFCS were for 1977/78. In order to use corresponding data, the 1974/75 data were aged to provide a proxy for utilization in 1977/78. The average daily attendance in the schools in 1974/75 was divided into the corresponding average daily attendance for 1977/78. The resulting factor

Appendix table 1--School-aged respondents by food source

Food source	Total number of respondents
School facilities	8,203
Other sources	5,528
Records with no food intake recorded at noon	2,000

(1.0078714) was applied to the poundages reported for 1974/75 by the food service in the Nation's schools study. 7/

At best, this procedure yields a proxy of what a followup study of food utilization in 1977/78 would have discovered. For example, in 1977/78 there were more school breakfasts served than in 1974/75. If the foods served in these breakfasts differed substantially from foods served in 1974/75, then the proxy estimates for 1977/78 would be inaccurate. Also, some of the actual commodities distributed by USDA to the participating NSLP schools in 1974/75 were different than those provided in 1977/78 (such as peanut oil in 1974/75 and soybean oil in 1977/78) as was the amount of cash distributed in lieu of commodities. Because of variations in crop production, school enrollments, and rates of school and student participation, no 2 years will be identical except by chance. These FS study data, however, were not only relevant, they were the only survey-based data available.

These data were not aged to 1980 because too many developments have occurred during the past 2 years to make such a procedure feasible. For instance, since 1978 there has been a substantial growth in the number of schools sponsoring a school breakfast program, and the foods used during the past 2 years are those with a lower fat and salt content. Not only has the volume and kind of commodities donated changed, but the foods purchased by the schools include more combined, precooked foods, such as beef stroganoff. These prepared food recipes may differ from those used when cooks prepare them in school kitchens.

Conversion Problems

Data from the food service in the Nation's schools study are reported in pounds (avoirdupois) of foods utilized. Senate Resolution 90 (9) called for a determination of impact upon the agricultural economy which implies that the support is most appropriately measured in the form in which the commodity is marketed at farm level. This means that the farm equivalent of ground beef will be cattle on the hoof, or for navy beans and other dry beans, the net weight in bags ready for shipment. Simple products such as apples present no problems, but combined-prepared ones, like apple pie, do. In the case of the pie, the cooked apples had to be converted back to a fresh, farm level equivalent. The ingredients used to form and bake the crust had to be disaggregated and converted to the farm equivalent weight.

For many commercially prepared products this was impossible because formulas are private proprietary information. For instance, there are many company formulas for oleomargarine, and these formulas can change as the price of competing ingredients changes during the year. It is impossible to disaggregate oleomargarine and convert each component to a farm equivalent commodity. The same holds true for many soft drinks, fruit ades, and punches.

7/ If estimates are desired on the basis of change in average daily rate of participation, multiply text tables 2, 4-13, and app. tables 5-52 by 1.026.

Where possible, recipes provided for school use were adopted as the basis for disaggregating combined-prepared foods. For example, the quantity of beef stew reported was disaggregated by using the beef stew recipe provided to schools by FNS in its Quantity Recipes for Type A School Lunches (38). In some instances, standard institutional and households recipe books were adopted because there were no published FNS recipes for the food. The references section identifies the cook books used (20-39).

Use of household recipes, in particular, can be statistically hazardous. For instance, a household recipe for English muffins, if adopted, would have included potatoes as an ingredient, as well as wheat flour. Fortunately, a grocery chain provided the formulation it used as a recipe for its private label English muffins. This formulation contained no potatoes. Since the chain recipe appeared to more likely represent the product purchased commercially by schools, this fomulation was adopted for disaggregating the total pounds of English muffins reported by the study.

The disaggregation process is illustrated with the combined-prepared food, corn bread. The net support for corn bread was computed prior to disaggregating the net support into its components. In the following illustration the conversion is made from gross pounds of corn bread reported as having been purchased by the schools.

In 1977/78, the Nation's schools purchased an estimated 1,823,409 pounds of corn bread. In order to disaggregate this total poundage into ingredient components, recipe B-7 in (38) was adopted.

To produce 1,823,409 pounds of corn bread with this recipe, the Nation's schools used 371,976 pounds of all-purpose flour, an equal amount of corn meal, and 32,821 pounds of baking powder (app. table 2). However, the conversion process does not stop at this point. To convert 371,976 pounds of all-purpose flour to a farm equivalent harvested wheat net weight, the total pounds of flour is divided by 0.73 (4, p. 43). Thus, the flour used to produce the corn bread weighs 509,556 pounds of harvested wheat at the farm gate.

The corresponding harvested corn farm equivalent weight is obtained by dividing 371,976 pounds of corn meal by 0.564 (4, p. 46), which equals 659,532 pounds of shelled corn, farm equivalent weight.

Similar conversion steps were required for nonfat dry milk powder and eggs. Once all of these conversions were completed, the algebraic aggregation of the contribution from each combined food was computed, and the adjustments made to yield the total net support for the commodity at farm level (table 4).

No effort was made to quantitatively identify the chemical additives that are common to commercially prepared foods. The amounts are such a small proportion of the total weight of each

prepared food that their omission should not severely affect the net support estimates.

NFCS Adjustment Factors

The Nationwide Food Consumption Survey provided the statistics needed to adjust the gross food utilization data to represent net commodity impact at farm level. The fundamental principle for adjustment was to take into account the quantity of each food which would be utilized if there were no formal school food service operations. Adjustments were made under three contexts described below.

Individual lunchtime intake records reported for school days during SY 1977/78 were the data base from which appropriate computations were made to derive the adjustments. Such records for school-aged respondents who obtained their food from formal school food service operations numbered 8,203. The corresponding figure for those who obtained their noontime food from other sources numbered 5,528. There were 2,000 records with no food intake recorded for lunchtime.

To obtain the data needed to make adjustments for individual foods, the computer was programmed to screen and total the number of times intakes for each item were reported. Of course, for the group who obtained their food from formal school programs, the maximum number of intakes would be 8,203, while the corresponding maximum for the other group would be 5,528.

Each context used the same notational system. The notations are presented in appendix table 3.

Appendix table 2--Ingredient composition of corn bread

Ingredients	Proportion of total ingredients used to produce product	Disaggregation of final product into component ingredients
	Percent	Pounds
All purpose flour	20.4	371,976
Corn meal	20.4	371,976
Baking powder	1.8	32,821
Nonfat dry milk powder	3.2	58,349
Sugar	6.4	116,698
Salt	.3	5,470
Eggs	13.6	247,984
Cooking fat	7.6	138,579
Water	26.3	479,556
Total	100.0	1,823,409

Appendix table 3--Notations used in equations for deriving net support for 1977/78

M_s	=	Total number of intake records of school-aged respondents who obtained their food from formal school food service operations.
M_o	=	Total number of intake records of school-aged respondents who obtained their food at noon from sources other than formal school food service operations.
M_n	=	Total number of intake records of school-aged respondents who reported zero food intake at noon.
E_s	=	Total number of servings of food reported for school supplied lunches. If all respondents who reported getting their food from school facilities reported an item, then the value of $E_s$would equal that of M_s .
E_o	=	Total number of servings of "ith food" reported by respondents who obtained their food from nonschool facilities.
MF_i	=	Total pounds of food reported received by purchase or donations by respondent schools, expanded to represent nationwide estimate.
S_i	=	Total net support (+ or -) for the "ith food," for 1977/78.

Context 1

Context I assumes that if there were no school food service programs, all former school-aged feeding program participants would eat the same foods reported in the Nationwide Food Consumption Survey for school-aged respondents who obtained their food from nonschool facilities.

Conceptually, net support for a food is equal to the gross receipts (MF_i) less the amount of food students selecting the food would have removed from the market had there been no school lunch feeding operations. An ideal data set, if available, would have allowed the following formulation:

(1) $S_i = MF_i - M_s(OZ)(E_o/M_o)$

where all terms are as defined above and OZ is defined as serving size. Essentially this statement means: net support equals actual receipts (purchases plus donations) less serving size times number of potential eaters (M_s), times the probability of eating the food (E_o/M_o).

We have data which serves as a reasonable surrogate for each of these data items. Since we assume that without a school food

service operation, school students will make the same selections as do those who now patronize other than a school source, E_o/M_o serves as the probability of selecting the food. The number of potential selectors is the number now patronizing the school food service operation. The data set available, however, does not give data on serving size directly. Data from the NFCS would yield identical serving sizes for any item, for all school-aged children, although varying by item, so equation (1) was rewritten to allow closer conformance to the data actually available.

Algebraically, equation (2) is equivalent to (1).

(2) $S_i = MF_i - M_s(OZ)(E_o/M_o)(E_s/E_s)$

$E_s(OZ)$ is equivalent to MF_i conceptually. This holds because MF_i is the quantity of food actually received by the school and served, and E_s represents the number of students receiving the food, thus implicity the quotient $MF_i/E_s = OZ$.

If we substitute MF_i into equation (2) for $E_s(OZ)$ we have

(3) $S_i = MF_i - MF_i(M_s/E_s)(E_o/M_o)$
which can be restated as

(4) $$S_i = MF_i \left(\frac{E_s/M_s - E_o/M_o}{E_s/M_s} \right)$$

Formulation (4) was used to make Context I computations.

For example, if $MF_i = 200,000$; $E_s = 50$; $M_s = 8203$; $E_o = 30$; and $M_o = 5528$, then $S_i = 21,932$ pounds, no matter which statement is used to make the computation.

Context II

Except for one characteristic, Context II is identical to Context I. Context II includes a proportional representation of school-aged respondents who in the NFCS reported they ate no food at lunchtime. Consequently M_n enters for the first time.

Using the same approach as just illustrated, the algebraic statement now becomes:

$$S_i = MF_i - \frac{MF_i}{E_s} \frac{M_o M_s}{M_o + M_n}$$

which can be rewritten as:

$$S_i = MF_i \left(\frac{E_s/M_s - E_o/(M_o+M_m)}{E_s/M_s} \right)$$

Context III

Context III assumes that school-aged respondents who had received free lunches from school feeding programs would not receive any lunch without a school food service program (although in reality, some would); and that school-aged respondents who reported they ate no lunch prior to the assumed cessation of school food service programs would continue to eat

no food at lunchtime. Context III also assumes that all other school-aged recipients of lunch from school food service programs now will eat the same foods as reported by their school-aged respondent counterparts who reported obtaining their food at lunchtime away from school facilities. In 1977/78, 38.8 percent of the school age children received a free lunch. Thus, 61.2 percent either paid the price charged by the school, or paid at a reduced price.

The same approach for this context derives the algebraic statement:

$$S_i = \left(0.612\ MF_i - \frac{MF_i}{E_S}\left(\frac{E_O M_S}{M_O+M_m}\right)\right) + 0.388\ MF_i$$

which can be rewritten as:

$$S_i = MF_i\ \{0.612\left[1 - \frac{E_O/(M_O+M_m)}{(E_S/M_S)}\right] + 0.388\}$$

Of the three contexts, the latter two appear to be more realistic, with the third the most realistic. While Context III yields the greatest support estimate, it assumes that all of the reduced price students will continue to eat a lunch equivalent to those eaten by respondents who ate food obtained from other than a school food service facility. In reality, most reduced price students probably will eat less than when they were obtaining their food from a school food service program. Some reduced price students may not eat any lunch if the school feeding programs were to cease.

NFCS Data Combination and Linkage Problems

When FS (19) data included a particular food, and when this food simultaneously was reported in each respondent category, there was no data combination problem unless the item was commonly used as an ingredient in foods prepared in the school cafeterias. For instance, rice, milk, cheese, eggs, salt, sugar, and salad dressing are such foods, even though these products in each instance were reported in each respondent category. These special subcases of Case 1 were treated in a manner consistent with the Case 4 treatment approach detailed below. However, appendix table 4 indicates there were several problems when this ideal data set did not prevail. The treatment adopted for each problem is described below for cases 2 through 7. Case 8 presents no problem because it represents the situation in which no data were reported by any source. The assumption must be that the food was not used either in the schools or by school-aged respondents.

Case 2. In Case 2, data were reported by FS (19), and respondents of school age who obtained their food from a nonschool source. The problem is that none of the school-aged respondents who obtained their food from school food service operations reported having had the food. Consequently there were no data for E_S for this food. The solution was to compute proxy E_S and M_S figures so that a proxy E_S/M_S ratio could be estimated and used.

Appendix table 4--Data combination problems; data available

Case	FS	NFCS	
	MF_i	E_o	E_s
1	Yes	Yes	Yes
2	Yes	Yes	No
3	Yes	No	Yes
4	Yes	No	No
5	No	Yes	Yes
6	No	Yes	No
7	No	No	Yes
8	No	No	No

The computation for estimating E_s, M_s, and E_s/M_s involved the following steps:

(1) The FS for the item was divided by 178 school days to get the quantity of the food served per school day;
(2) This quantity was divided by the average serving size for this food (16) to compute the number of servings per day. This figure becomes the proxy E_s;

(3) The average daily lunches served becomes the proxy for M_s (15);

(4) The estimated E_s divided by the proxy M_s yields the proxy E_s /M_s ratio which was used along with the reported FS (19), and E_o and M_o to estimate net support for the food.

Items for which proxy E_s's were used were:

imitation cheese
brown sugar
butter crackers
rice cereal
concentrated soups
beef sausage
canned lunch meats
avocados
deviled crab
soy sauce
ground coffee
poultry fricasse
fruit punch concentrate
hot peppers
vanilla
chicken rolls
waffles
granola
fat back
bran
wheat cereal
fryer/roaster chicken
summer sausage
gumbo soup
cranberry juice concentrate
danish
pumpernickel
pea soup
macaroni shells
poultry franks
turkey/ham roll
lemon/lime juice
pumpkin
pepper
scrapple
egg rolls

Case 3. FS data, and figures for school-aged respondents who obtained their food from school food service operations were available, but there were none for those respondents who obtained their food from other than school sources. In these instances the FS data were treated as the net support:

white powered sugar
honeydew melon
grapefruit/orange segments
pimento
filled peach halves
mock chicken legs
waldorf salad
caramel topping
kale greens
stewed mixed vegetables
celery/cheese sticks
fish with batter
lemon/lime juice concentrate
white fish
apricots
brussels sprouts
pumpkin custard
canned beef
meat turnovers

Case 4. Case IV includes items found in school records, but for which there were neither E_S nor E_O data. School-aged respondents did not report them. There were several explanations. For some the zero E_S and E_O may be due to the vagaries of sampling. For others, like bulk flour and rounds and quarters of beef, the product was not served in the form purchased. The residual items were an intrinsic part of the prepared food, such as salt, sugar, spices, flavorings, and food colors. Data treatments varied by kind of product, the purpose of use, and the availability of data for making the kinds of adjustments described below.

For products such as fish, spices, and flavorings, most of which are not major U.S. farm products and for which no satisfactory alternative data sources were available, the quantities were simply reported as net support for the product--but were not included in text table 4 which reports farm support.

For some products, valuable support information was obtainable both at product and at farm levels. For instance, while no respondents in the NFCS reported consuming pie shells, the FS survey reported a sizeable purchase of pie shells. For purposes of estimating product support for pie shells (a measure of some importance to pie shell manufacturers), information on both pie and pie shell consumption is useful, and in this instance, net support was reported for pie shells equal to the total quantity of pie shells reported purchased by the schools in the FS survey. But to carry this line of reasoning through to the farm level would be tantamount to using a support coefficient for each context of 1.0. While this is possible, it can occur only if the food is not eaten outside of school preparations--hence, it is the theoretical upper limit of support. In the case of pie shells, a more appropriate procedure was adopted which allocated the pie shells to specific varieties of pie and used the appropriate support coefficients for each type of pie. This provided a more meaningful measure of net support for the major farm component of pie shells--wheat equivalent at the farm level.

Complete information to make such an adjustment was not always available. Information is required on what products schools usually make from the products in question, and the relative popularity of the products on the school menus. The NFCS data reporting the frequency of choices of school provided a reasonably reliable source of the latter data needs. The source of the information about what foods are customarily prepared from specified ingredients was obtained from school food service experts. While subjective in nature, it provides an estimate superior to that which would result without making an adjustment.

An illustration using the adjustment process will show why this is true. White flour was reported as purchased by the FS survey, but was not reported by school-aged respondents of the NFCS. Treating total flour purchased as net support adds about 161 million pounds of net support to each context and clearly overstates the impact of school food service operations on the support for wheat. Information supplied by school food service experts indicated that products which schools most often prepare from basic ingredients of this kind were specialty breads, rolls, and a few breakfast items. Since school breakfast programs were not widespread in 1974/75, no allocation was made to items such as waffles, pancakes, or English muffins. While it was indicated that some flour was used to bake white bread, it also was suggested that a very small proportion of white bread used in the schools was prepared in the schools. Because of the predominance of white bread among bread items, inclusion of this item would essentially have resulted in allocating all of the flour to white bread--contradicting the information provided by food service experts.

In the final analysis, the bulk flour purchased was allocated to: French bread, soft white rolls, brown-and-serve rolls, whole wheat bread, and whole wheat rolls. Pastry flour was also included and was allocated only to cakes and pies.

The allocation procedures included these steps:

1. Total white flour was disaggregated into all-purpose and pastry flours. In this example, the 160,616,725 pounds of all-purpose white flour bought in bulk was allocated among the products reported by NFCS respondents which school program experts indicated were primary products to which bulk flour would normally be allocated.

2. The number of servings, E_s, reported by school-aged respondents who participated in school feeding operations was adjusted by the proportion of flour in each primary reported product, by multiplying column 1 in table A by column 2. The results appear in column 3.

This step, in effect, adjusts the E_s servings, reported by the NFCS respondents from representing a relative frequency of receiving a unit of prepared food to receiving a unit of all-purpose flour. The frequencies in column 4 are multiplied by 160,616,725 pounds of flour to allocate the flour among these products, and are reported in column 5.

Working table A

Item	(1) E_s	(2) Recipe flour content	(3) Adjusted E_s	(4) Distribution of adj. Es	(5) Bulk flour allocation
	Number	Percent	Number	Percent	Pounds
French bread	102	0.581	176	0.154	24,734,976
Soft white rolls	225	.532	120	.105	16,864,756
Brown-and-serve rolls	1,566	.532	823	.730	117,250,209
Whole wheat bread	82	.110	9	.008	12,849,934
Whole wheat rolls	24	.110	3	.003	481,850
Total	1,999	--	1,141	1.000	160,616,725

-- = Not applicable.

3. Each figure in column 5 was divided by 0.73 to obtain the farm level wheat equivalent weight in pounds. This farm equivalent weight of wheat was then multiplied by the factors for each of the three contexts to determine the net support, positive or negative, resulting from the allocation of bulk flour.

An illustration for Context I, working table B, follows. Context I adjustment factors,

$$\frac{E_s/M_s - E_o/M_o}{E_s/M_s}$$

are reported by items in column 2. These are applied to column 1's gross wheat support derived from bulk all-purpose flour receipts. Column 3 reports the net support in terms of farm equivalent wheat in thousands of pounds.

The comparison of the pre- and postallocation figures expressed in terms of farm equivalent wheat in working table C indicate the changes resulting from the adjustments involved in allocating the bulk white, all-purpose flour, expressed in terms of farm equivalent wheat support.

Corresponding procedures were followed for pastry flour and whole wheat flours. Commodities treated in this manner, (some of which were Case 1 subtypes) included: rice, milk, cheese, eggs, granulated sugar, salt, salad dressing, rounds of beef, pork, and flour.

The magnitude of Case IV type problems is identified by the following listing of Case IV food items. They are presented by food groups, and the unallocated product weight is reported in

Working table B

Item	(1) Allocated wheat	(2) Context I	(3) Net wheat support from bulk white, all-purpose flour
	Pounds	Adjustment factor	1,000 pounds
French bread	33,883,529	0.6944668	23,531
Soft white rolls	23,102,405	.7955449	18,379
Brown-and-serve rolls	160,616,725	.6626664	106,435
Whole wheat bread	1,760,184	-6.7092837	-11,810
Whole wheat rolls	660,068	.9381408	619
Total	220,022,911	--	137,154

-- = Not applicable.

thousands of pounds. In the bread and cereals group, corn meal, bulk white, all-purpose flour, pizza shells, and tortillas represent items of substance for which the allocation process just described above was adopted. All items with the code A were allocated in this manner. Of the remainder, three coded I are not primary farm products and are not included in table 4. Four coded P are proprietary items which could not be disaggregated and allocated. Three with the code D, were disaggregated and allocated when relevant, such as mush; or as with barley, were allocated directly, the allocation being made with the weight of 1 in each instance.

Working table C

Item	Bulk white, all-purpose flour in farm equivalent wheat weights	
	Preallocation	Postallocation
	1,000 pounds	
Unallocated bulk flour	220,023	0
French bread	4,305	38,189
Soft white rolls	10,655	33,757
Brown-and-serve rolls	1,435	162,051
Whole wheat bread	259	2,019
Whole wheat rolls	37	698
Total	236,714	236,714

As this listing's summary shows, 23.9 percent were allocated as was discussed for bulk flour. These accounted for most items of substantial size. Thirty-one percent were distributed without such an allocation, the allocation being on the basis of a weight of 1 for each item, for each context. Most were prepared-combined foods which were disaggregated prior to distributing the components. Cupcakes were one of the largest, amounting to 14.7 million pounds. From this product poundage, converted to farm equivalent units where possible, came 5.1 millions pounds of wheat, 3.9 million pounds of sugar, 58,000 pounds of milk, 1.7 million pounds of shortening, 2.0 million pounds of shell eggs, almost 59,000 pounds of salt, and about 191,000 pounds of baking powder. The wheat, eggs, and milk were allocated with a weight of 1 totals reported in table 4. The other items were reported as part of the totals of table 2.

Almost 23 percent of the listed items were irrelevant for U.S. farm support, consisting of products such as baking chocolate chips, fish, and dry gelatin mix. About 22 percent were proprietary items for which no recipe was available and which were not reported in table 4 totals. These included items such as smoke sauce, taco mix, and cola syrup. About 22 percent were spices with no direct relevance to table 4 commodities.

In interpreting table 4 net support, these allocation procedures must be remembered in order to understand the reported data. In total, for all three contexts, the fact that the allocation procedures could not be applied to each item meant that some overestimation probably remains in table 4 support estimates, simply because some items were included with the weight of 1.

Case 5. NFCS items were far too detailed to match most of those reported by school records. Seven-digit NFCS codes were aggregated in order to match food products reported by the school, using the school reported categories as the context for aggregation. There were items which matched, for example, 216-0200 beef, chipped, dried uncooked, is the only code for that form of dried beef, and 751-1900 is the sole code for parsley. NFCS codes are reported in (16).

The aggregation problem and the procedure used to resolve it are illustrated in the case of two common products: chicken fryers and roast beef. These NFCS codes were summed to match these two school food products.

Chicken Fryers

241-0101 Chicken, broiler or fryer, with bone, cooked, skin eaten, or NS (not specified) as to skin.

241-0102 Chicken, broiler or fryer, with bone, cooked, skin not eaten.

241-0103 Chicken, broiler or fryer, with bone, baked or fried, skin eaten or NS as to skin.

241-0104 Chicken, broiler or fryer, with bone, baked or fried skin not eaten.

Food items not reported by NFCS respondents

Food item	1,000 lbs.		Food item	1,000 lbs.	
Bread and cereal group:					
Barley	216	D	Mixed seeds	6	I
Chicken rice soup	470	A	Pizza dough	90	A
Cinnamon bread	145	D	Pizza shells	1,817	A
Corn bread mix	74	P	Rolled wheat	170	D
Corn meal	19,338	A	Sunflower meal	65	I
Corn meal mush	39	D	Sunflowerseeds	5	I
Doughnuts, fortified	18	A	Taco mix	983	P
Flour (white)	227,531	A	Tortilla	13,056	A
Lysine	339	P	Turkey/noodle soup	202	A
Matso meal crackers	2	P			
Fats/sweets/alcohol group:					
Baking aids--					
Baking chips-sweet	539	I	Molasses	723	I
Baking chocolate	903	I	Praline cake decorations	14	P
Beet granules (sugar)	1,125	I	Strawberry glaze	43	P
Dry icing mix	861	P			
Cake--					
Chocolate	2,598	D	Marble	73	D
Cupcakes	14,657	D	Oatmeal	32	D
Doughnuts (cake)	9,004	D	Petifours, dobos	16	P
Doughnuts (yeast)	4,399	D	Pound	105	D
Gingerbread	776	D	Upsidedown	323	D
Drink bases--					
Cocoa mix	2,628	P	Cola syrup	2,780	P
Chocolate syrup	1,371	P	Root beer syrup	182	P
Grape/orange syrup	638	P	Sprite syrup	957	P 1/
Fats--					
Green goddess dressing 1/	4	B	Salad dressing cooked	17,442	A
Honey butter	18	D	Suet	7	B
Lard	1,408	B	Sweet/sour dressing	51	P
Margarine	441	P			
Mixes--					
Beef pot pie mix	42	P	Fruit crisp	21	P
Brownie mix	772	P	Gelatin/pudding	19,847	P
Cake (assorted) mixes	4,770	P	Gingerbread	949	P
Chicken pie mix	64	P	Mincemeat	24	P

continued--

Food items not reported by NFCS respondents--continued

Food item	1,000 lbs.		Food item	1,000 lbs.	
Cinnamon crisp mix	120	P	Pie crust	29	P
Dried meat loaf mix w/TVP	6	P	Rolls/biscuit mix	260	P
Doughnut bread mix	1,248	P	Streusel	229	P
Pie--					
Lemon pie filling	471	P	Pie shells	748	A
Pecan pie	199	D	Pineapple pie	39	A
Peanut butter cream pie	66	P	Rhubarb pie	53	D
Meat/poultry/fish/beans group:					
Bean/bacon concentrate soup	134	A	Hocks	130	D
Beef brisket	645	A	Mackerel	64	I
Beef, breaded patty	381	A	Meat loaf w/ TVP	67	A
Beef knuckles	735	D	Ox tails	21	D
Beef, ground w/TVP	8,279	A	Perch	3,043	I
Beef, quarters	251	A	Pigs feet	15	D
Beef rounds	1,758	A	Pigs tails	29	D
Beef shanks	21	D	Pollock	12,877	I
Beef tips, fingers	1,466	A	Pork butt	684	A
Catfish	337	I	Pork, canned	24,644	A
Charburgers	8,615	A	Pork, cubed	382	A
Cubes, beef	394	A	Pork organs	44	B
Fish steak	246	I	Pork shoulders	274	A
Flounder	210	I	Pork stew meat	542	A
Gefilte	246	I	Turbot	629	I
Ground pork	870	A	Turkey, canned	367	A
Halibut	46	I	Turkey, ground	497	A
Ham, baked (3 items)	8,992	A	Walnuts, English	9,538	D
			Whiting	1,248	I
Milk/cheese/group:					
Cheese sauce	355	A	Imitation sour cream	25	A
Prepared mixes	22,600	P			
Prepared-combined foods:					
Apple pie filling	3,456	A	Gelatin dry mix	2,426	I
Apricot pie filling	329	A	Gravy & dumplings	670	D
Barbecue beef on bun	131	A	Ham/bean casserole	327	D
Barbecue chicken	407	D	Hamburger Helper	13	D
Beef/bacon patties	41	D	Ham/rice dinner	34	D
Beef/cheese sandwich	12	D	Italian sausage w/ts	119	D
Beef/cheese steak	3	D	Liver and onions	6	D
Beef cutlet/w/TVP	22	D	Misc. fruit mixtures	826	D
Beef fritter	429	D	Oven-fried chicken	210	A

continued--

Food items not reported by NFCS respondents--continued

Food item	1,000 lbs.		Food item	1,000 lbs.	
Beef w/gravy	4,647	A	Jelly sandwich	14	D
Beef patties	10,457	A	Mush corn meal	118	D
Beef stick	88	P	Pastrami on rye	286	D
Berry pie filling	259	A	Patties, NFS	125	D
Breaded clams	34	I	Peach pie filling	2,287	A
Breaded pork chopettes	288	A	Pear 1/2 w/cottage cheese	80	D
Breaded scallops	2	I	Pineapple pie filling	134	A
Braised beef	238	D	Pork cutlets	24	A
Celery/peanut butter stick	55	D	Porkettes	205	A
Cheese dog	15	D	Pork steak	28	A
Cherry pie filling	1,470	A	Raspberry pie filling	471	A
Chicken fried steak	6,973	D	Roast beef salad	16	D
Chicken stew	281	D	Sausage & biscuit	8	D
Clam chowder concentrate	470	I	Scrambled eggs	5	D
Cream of chicken soup	1,008	A	Shrimp rolls	107	P
Cubed pork	82	A	Stuffed green peppers	17	D
Cubed pork with gravy	927	A	Turkey/cheese sandwich	125	D
Dressings & stuffings	189	D	Turkey patties w/TVP	1	D
Fish/cheese patty	543	D	Veal patties	498	D
Fritter, pork	911	D			
Spices and other foods:					
Almond extract	23	I	Liquid coney sauce	35	P
All-purpose sauce	98	I	Marjoram	2	I
Anise	1	I	Monosodium glutamate	52	I
Baking powder	2,730	I	Onion flavored rings	223	P
Baking soda	553	I	Onion powder	747	P
Barbecue sauce	2,784	P	Oregano	73	I
Basil	17	I	Other extracts	16	I
Bay leaves	14	I	Other seasonings	279	I
Camino	14	I	Paprika	15	I
Carbonated soft drinks	17,056	P	Pickles	12,396	A
Celery seeds	48	I	Pie spice	11	I
Chickory coffee	4	P	Pie stabilizer	15	I
Chili powder	802	I	Poppy seeds	0.3	I
Cinnamon	388	I	Poultry seasonings	38	I
Corn starch	3,322	P	Relishes	734	A
Cocktail sauce	58	P	Sage	35	I
Coney sauce	90	P	Sauces & gravies	1,082	P
Cream of tartar	958	P	Sesame seeds	179	I
Crumbles, TVP	3,742	D	Seasoned salt	648	I
Dry instant tea mix	665	I	Shredded coconut	1,640	I
Flavorings	45	I	Smoke sauce	27	P
Food coloring	123	I	Soft drinks (carbonated)	17,056	P

continued--

Food items not reported by NFCS respondents--continued

Food item	1,000 lbs.		Food item	1,000 lbs.	
Garlic powder	332	D	Soup cubes	1,303	P
Ginger	54	I	Soup paste	1,148	P
Hominy	275	D	Thickeners	0.3	I
Horseradish	7	P	Thyme	6	I
Ice tea mix	238	P	TVP	5,550	D
Instant coffee	445	P	Yeast	3,513	I
Lemon extract	64	I			
Vegetable and fruit group:					
Asparagus	222	D	Lemonade frozen concentrate	145	P
Bean soup concentrate	336	A	Lemons	485	D
Beef/vegt/soup conc.	1,613	A	Limes	27	D
Blackberries	27	D	Minestrone soup conc.	538	A
Blueberries	522	D	Orange/grapefruit juice	2,354	P
Boysenberries	23	D	Orange, FCOJ	390,954	A
Cherries, marachino	979	D	Papaya	46	I
Cream of celery soup conc.	605	A	Raspberries	56	D
Chinese vegetables	157	D	Rhubarb	98	D
Currents	3	D	Rutabagas	36	A
Dates	59	I	Shallots	6	D
Eggplant	27	D	Split pea soup mix	128	P
Escarole	6	D	Tomato juice conc.	473	P
Figs	123	I	Tomato rice soup conc.	202	A
Garlic	20	D	Tomato soup conc.	10,477	A
Grape juice concentrate	210	D	Turkey/vegt. soup conc.	336	A
Grapefruit juice conc.	2,103	A	Vegetable juice	40	P
Gumbo soup conc.	134	D	Vegetable soup conc.	2,617	A
Lemonade concentrate	121	P	Watercress	64	D

1/ The reporting of products with trade or brand names neither constitutes an endorsement nor a quality evaluation by the USDA.

CODE	INTERPRETATION
A	Allocated prior to computing net product support.
P	Proprietary item. Components unknown.
B	Byproduct; to include would involve double counting.
I	Irrelevant to computation for farm level support. Item either imported or not raised on U.S. farms at a commercial level of output.

D Item, or a component of an item, which was distributed with a weight of 1 across all contexts, recipes were used to disaggregate prepared-combined items into their components.

Summary

Food Group	A	B	D	I	P	Total	Percent
Bread and cereal	8		4	3	4	19	7.2
Fats, sweets, and alcohol	3	2	12	4	29	50	18.9
Meat, pork, fish, and beans	19	1	7	10		37	14.0
Milk and cheese	2		1		1	4	1.5
Prepared-combined	18		36	3	2	59	22.4
Spices	2		4	34	17	57	21.6
Vegetable and fruit	11		18	3	6	38	14.4
Total	63	3	82	57	59	264	
Percent	23.9	1/	31.0	22.7	22.4		100.0

1/ This figure was combined with total for Column I in computing 22.7 for I. It amounts to about 1.1 by itself.

241-0105 Chicken, broiler or fryer, with bone, broiled, skin eaten or NS as to skin.

241-0106 Chicken, broiler or fryer, with bone, broiled, skin not eaten.

241-0108 Chicken, broiler or fryer, with bone, roasted, skin eaten or NS as to skin.

241-0113 Chicken with bone, floured, fried or baked.

241-0115 Chicken, broiler or fryer, with bone, battered, fried, skin eaten or NS as to skin.

Roast Beef

214-0100 Beef, roast, roasted, NS as to fat.

214-0111 Beef, roast, roasted, lean and fat eaten.

214-0112 Beef, roast, roasted, lean only eaten.

214-0700 Beef, pot roast, cooked, NS as to fat.

214-0711 Beef, pot roast, cooked, lean and fat eaten.

214-0712 Beef, pot roast, cooked, lean only eaten.

Single copies of a list which presents the codes grouped into each food product listed in table 2 are available upon written request to: Food Economics Branch, Room 260, National Economics

Division, Economic Research Service, United States Department of Agriculture, 500 12th Street, S.W., Washington, D.C. 20250.

Case 6. There were instances where there were no data for either FS (19) or school-aged respondents who obtained their food from school food service operations. A negative support estimate for Context III was derived using these computational steps:

(1) The number of average daily lunches served, 23,662,761, was reduced by (.388) to account for the free lunch students assumed to eat no lunch, provided there were no formal lunch operations;

(2) These 14,481,610 lunches were then reduced additionally by (.266) to account for the records which contained no lunch data;

(3) Of the residual 20,629,502 lunches, the ratio E_o/M_o from (19) (here 0.00109), yielded the number of servings on a given day, in this case 11,586;

(4) This average daily number of servings was then multiplied by 178 school days to derive the total servings during the school year, here 2,062,308;

(5) Total servings multiplied by serving size, here 0.1 gram for saccharine, yields 206,031 grams;

(6) Total grams divided by 28.3495 yielded total ounces, 7,275; and

(7) Total ounces divided by 16 derived total pounds, here 455.

The products for which Case 6 methodology was applied are cited in table 3 of the text.

Case 7. In some instances there were neither FS nor E_o data, while there were E_s figures. If the E_s item reported could be prepared from ingredients reported received by (19) but in a different form, the FS figure was accepted as representing net support. Items treated in this manner were:

julienne salad
cheese bread
pumpkin bread
chocolate cookie made with rice cereal
lemon bar
brown-and-serve pork sausage
dry chick peas
broccoli with cheese sauce
vegetable salad in gelatin
string beans with onions, NFS
cherry crisp
strawberry drink
limas with tomatoes
turnip greens, NFS
snow peas, cooked pods
corn with peppers
ambrosia
apple betty
corn soup (cream of)
cabbage with ham hocks
dumplings (meat filled)
bacon/chicken sandwich
cheese biscuit
butterscotch brownie

cherry crisp	cheese biscuit
strawberry drink	butterscotch brownie
stew, NFS	cookie, ladyfinger
batter bread	chicken, rice, bean mix
bacon/cheese sandwich	vegetarian meat loaf
garlic rolls	red cabbage (raw)
applesauce cookie	succotash
cookie, cone shell, ice cream type	peas and corn, NFS
macaroons	peach crisp
smoked sausage, chinese style	peach nectar
meatless meat balls	vegetable noodle soup
hash, NFS	pochito

The number of respondents reporting a serving ranged from 1 to 64 (apple betty). Most had a single respondent. Two items had as many as 11, the remainder were fewer than 7.

Regional Support Computations

Interpretations using these regional net support figures must be made with the recognition that: (1) Vagaries in weather, extent of insect infestations, or animal and poultry diseases will determine marketable quantities from one year to another; (2) the prospect of a large inventory carryover for an item(s) can affect the extent to which the USDA purchases and donates the item(s) for any given year; and (3) changes in school food service practices, such as a deemphasis upon foods with high fat content, over time, will affect the quantities of particular foods used in the feeding programs.

Even though nationwide support may remain quite stable year to year, support for any particular State or group of States may vary substantially from one year to the next. For example, one State could suffer extensive frost damage from an early freeze, while simultaneously another had a bumper crop. Even if the nationwide total production for the commodity were the same from one year to the next, the support given by the feeding programs to each State would vary greatly between the 2 years. In this illustration, the State with the freeze would have little to sell either to the schools or to the USDA.

Consequently, the nationwide figures for one year are more likely to reflect support reality from one year to the next than are State or regional figures. However, the only way to disaggregate nationwide figures into regional and State subtotals was to start with State level production or sales from other data sources. To derive State data from the nationwide totals, the share of each major producer, here each State, had to be computed. This computation relied upon three data bases (12, 17, 18).

Agricultural Statistics (11) provided figures in pounds both of product produced and marketed at farm level. Ratios were computed for each State's share, and were applied to the nationwide figures to obtain State and regional totals. Data for 1977 and 1978 crop years were used to minimize the impact of unique conditions that often pertain to a particular crop year, or production period. In the case of some commodities it also

was not clear which production year supplied the food purchased by the schools. A school might purchase processed items as of August of a particular year, and at least some of its order might be from an inventory of the preceding year's crop. Use of both attributable to each region and its constituent States took such a possibility into account.

Unfortunately for a few products, Agricultural Statistics reported some States only as a component of the aggregate statistic, "Other States." In order to disaggregate the "Other States" figure into figures for each component State, acres harvested, livestock, and poultry data from (17, 18) were used. For example, if the "Other States" for an item included Indiana, Iowa, Illinois, and Wisconsin, then acres harvested for each of these States were totaled, and the total was divided into each State's figures to derive that State's share. These share ratios were applied to the net support reported for these "Other States" to disaggregate the total support for this group of States. If the commodity were a livestock or poultry item, corresponding calculations were made using animal or bird figures instead of acres harvested.

All tabular data are reported in thousands of pounds. Rounding procedures have resulted in slight overstatements for some and understatements for other States. For example, if the data for a State showed that it had 700 pounds, it was reported as having 1,000, whereas if it had been 400 pounds it would have carried a footnote indicating that its net support had been less than 1,000 pounds. Regional totals, of course, include the actual total net poundages for each component State. Consequently, the net support data reported nationwide are the most accurate. Data reported for each region are more accurate than for any State with 1,000 pounds of reported support.

STATE SUPPORT TABLES

Appendix tables 5-52 contain support estimates for specified commodities in farm level equivalent weights by State and FNS Region. Where the net support is positive, it is reported under the column labeled positive, and where negative under the column labeled negative.

Appendix table 5--Beef cattle and calves: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut	404		549		704	
Maine	404		549		704	
Massachusetts	404		549		704	
New Hampshire	404		549		704	
Rhode Island						
Vermont	1,213		1,648		2,114	
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland	1,214		1,648		2,114	
New Jersey	404		549		705	
New York	5,259		7,142		9,159	
Pennsylvania	4,450		6,043		7,750	
Virginia	3,641		4,945		6,341	
West Virginia	1,213		1,648		2,114	
Southeast:						
Alabama	6,877		9,340		11,977	
Florida	8,090		10,988		14,090	
Georgia	6,068		8,241		10,568	
Kentucky	9,708		13,186		16.908	
Mississippi	8,495		11,538		14,795	
North Carolina	2,427		3,297		4,227	
South Carolina	2,023		2,747		3,523	
Tennessee	8,090		10.988		14,090	
Midwest:						
Illinois	10,113		13,735		17,613	
Indiana	5,663		7,692		9,863	
Michigan	4,045		5,494		7,045	
Minnesota	11,731		15,933		20,431	
Ohio	6,068		8,241		10,568	
Wisconsin	10,922		14,834		19,022	
Mountain Plains:						
Colorado	18,607		25,273		32,408	
Iowa	28,720		39,007		50,021	
Kansas	27,102		36,810		47,203	
Missouri	16,180		21,976		28,181	
Montana	10,113		13,735		17,613	
Nebraska	26,698		36,261		46,498	
North Dakota	7,281		9,889		12,681	
South Dakota	12,540		17,031		21,840	
Utah	2,427		3,297		4,227	
Wyoming	6,068		8,241		10,568	

See footnote at end of table.

Continued--

Appendix table 5--Beef cattle and calves: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas	7,281		9,889		12,681	
Louisiana	4,854		6,593		8,454	
New Mexico	9,304		12,636		16,204	
Oklahoma	19,821		26,921		34,521	
Texas	49,755		67,576		86,656	
Western:						
Alaska						
Arizona	6,472		8,790		11,272	
California	17,394		23,624		30,294	
Hawaii	404		549		704	
Idaho	5,259		7,142		9,159	
Nevada	1,618		2,198		2,818	
Oregon	4,045		5,494		7,045	
Washington	3,236		4,395		5,636	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 6--Hogs: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut		14		1		18
Maine		7		1		9
Massachusetts		63		6		80
New Hampshire		14		1		18
Rhode Island		7		1		9
Vermont		7		1		9
Mid-Atlantic:						
Delaware		56		6		71
District of Columbia						
Maryland		188		19		240
New Jersey		56		6		71
New York		160		16		204
Pennsylvania		683		70		870
Virginia		599		61		764
West Virginia		91		9		115
Southeast:						
Alabama		843		86		1,074
Florida		327		33		417
Georgia		1,720		175		2,193
Kentucky		1,267		129		1,616
Mississippi		362		37		462
North Carolina		2,493		254		3,179
South Carolina		550		56		701
Tennessee		1,421		145		1,811
Midwest:						
Illinois		8,553		873		10,903
Indiana		5,216		532		6,650
Michigan		843		86		1,074
Minnesota		5,126		523		6,535
Ohio		2,069		211		2,637
Wisconsin		2,048		209		2,610
Mountain Plains:						
Colorado		411		42		524
Iowa		17,586		1,794		22,418
Kansas		2,479		253		3,161
Missouri		4,639		473		5,913
Montana		279		29		355
Nebraska		4,151		423		5,292
North Dakota		348		36		444
South Dakota		2,082		212		2,654
Utah		56		6		71
Wyoming		28		3		36

See footnote at end of table.

Continued--

Appendix table 6--Hogs: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas		411	42		524	
Louisiana		146	15		186	
New Mexico		70	7		89	
Oklahoma		355	36		453	
Texas		1,129	115		1,438	
Western:						
Alaska						
Arizona		153	16		195	
California		216	22		275	
Hawaii		48	5		63	
Idaho		76	8		98	
Nevada		7	1		9	
Oregon		118	12		151	
Washington		77	8		98	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 7--Eggs: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut	734		384		38	
Maine	1,637		857		84	
Massachusetts	282		148		15	
New Hampshire	169		87		9	
Rhode Island	56		30		3	
Vermont	113		59		6	
Mid-Atlantic:						
Delaware	113		59		6	
District of Columbia						
Maryland	282		148		15	
New Jersey	339		177		17	
New York	1,580		827		81	
Pennsylvania	2,709		1,418		140	
Virginia	734		384		38	
West Virginia	169		89		9	
Southeast:						
Alabama	2,766		1,447		142	
Florida	2,540		1,329		131	
Georgia	4,798		2,511		247	
Kentucky	508		266		26	
Mississippi	1,468		768		76	
North Carolina	2,540		1,329		131	
South Carolina	1,129		591		58	
Tennessee	847		443		44	
Midwest:						
Illinois	1,185		620		61	
Indiana	2,822		1,477		145	
Michigan	1,298		679		67	
Minnesota	1,863		975		96	
Ohio	1,750		916		90	
Wisconsin	847		443		44	
Mountain Plains:						
Colorado	452		236		23	
Iowa	1,693		886		87	
Kansas	452		236		23	
Missouri	1,072		561		55	
Montana	169		87		9	
Nebraska	677		355		35	
North Dakota	56		30		3	
South Dakota	508		266		26	
Utah	339		177		17	
Wyoming	0		0		0	

See footnote at end of table.

Continued--

Appendix table 7--Eggs: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas		3,330		1,743		171
Louisiana		508		266		26
New Mexico		282		148		15
Oklahoma		452		236		23
Texas		2,145		11,223		110
Western:						
Alaska		0		0		0
Arizona		113		59		6
California		7,169		3,751		369
Hawaii		169		89		9
Idaho		169		89		9
Nevada		0		0		0
Oregon		452		236		23
Washington		960		502		49

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 8--Apples: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut		647		122		433
Maine		1,109		210		741
Massachusetts		1,294		245		865
New Hampshire		739		140		494
Rhode Island		93		17		62
Vermont		647		123		433
Mid-Atlantic:						
Delaware		185		35		124
District of Columbia						
Maryland		1,017		193		680
New Jersey		1,386		263		927
New York		12,753		2,416		8,527
Pennsylvania		5,545		1,051		3,707
Virginia		4,990		946		3,337
West Virginia		3,327		630		2,224
Southeast:						
Alabama						
Florida						
Georgia		277		53		185
Kentucky		277		53		185
Mississippi						
North Carolina		3,881		735		2,595
South Carolina		277		53		185
Tennessee		93		17		62
Midwest:						
Illinois		1,294		245		865
Indiana		739		140		494
Michigan		9,611		1,821		6,426
Minnesota		277		53		185
Ohio		1,294		245		865
Wisconsin		832		158		556
Mountain Plains:						
Colorado		739		140		494
Iowa		93		17		62
Kansas		185		35		124
Missouri		647		122		433
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah		555		105		371
Wyoming						

See footnote at end of table.

Continued--

Appendix table 8--Apples: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
			1,000 pounds			
Southwest:						
Arkansas		277		53		185
Louisiana						
New Mexico		277		53		185
Oklahoma						
Texas						
Western:						
Alaska						
Arizona						
California		6,376		1,208		4,264
Hawaii						
Idaho		1,386		263		927
Nevada						
Oregon		1,848		350		1,236
Washington		27,447		5,201		18,351

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 9--Cantaloup: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic						
Delaware						
District of Columbia						
Maryland						
New Jersey						
New York						
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia	123		145		169	
Kentucky						
Mississipi						
North Carolina						
South Carolina	71		84		98	
Tennessee						
Midwest:						
Illinois						
Indiana	142		168		195	
Michigan	90		107		124	
Minnesota						
Ohio						
Wisconsin						
Mountain Plains:						
Colorado	71		84		98	
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 9--Cantaloup: Regional net farm commodity support provided by school feeding programs in SY 1977/78 --Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma						
Texas	1,110		1,311		1,526	
Western						
Alaska						
Arizona	846		998		1,162	
California	4,003		4,725		5,500	
Hawaii						
Idaho						
Nevada						
Oregon						
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 10--Cranberries: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts	1,129		1,163		1,199	
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey	208		214		221	
New York						
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois						
Indiana						
Michigan						
Minnesota						
Ohio						
Wisconsin	921		949		979	
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 10--Cranberries: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma						
Texas						
Western:						
Alaska						
Arizona						
California						
Hawaii						
Idaho						
Nevada						
Oregon	95		98		101	
Washington	150		155		159	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 11--Grapefruits: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey						
New York						
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida		6,230		3,258		716
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois						
Indiana						
Michigan						
Minnesota						
Ohio						
Wisconsin						
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 11--Grapefruits: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma						
Texas		1,384		724		159
Western:						
Alaska						
Arizona		266		139		31
California		713		373		82
Hawaii						
Idaho						
Nevada						
Oregon						
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 12--Grapes, including raisins: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey						
New York		1,598		1,083		531
Pennsylvania		470		319		156
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia		28		19		9
Kentucky						
Mississippi						
North Carolina		47		32		16
South Carolina		19		12		7
Tennessee						
Midwest:						
Illinois						
Indiana						
Michigan		564		382		187
Minnesota						
Ohio		94		64		31
Wisconsin						
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri		47		32		16
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 12--Grapes, including raisins: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas		94		64		31
Louisiana						
New Mexico						
Oklahoma						
Texas						
Western:						
Alaska						
Arizona		142		96		47
California		42,308		28,672		14,048
Hawaii						
Idaho						
Nevada						
Oregon						
Washington		1,598		1,083		530

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 13--Oranges: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey						
New York						
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida	43,373		133,267		229,672	
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois						
Indiana						
Michigan						
Minnesota						
Ohio						
Wisconsin						
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued-

Appendix table 13--Oranges: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma						
Texas	1,590		4,884		8,417	
Western:						
Alaska						
Arizona	965		2,965		5,111	
California	10,843		33,317		57,418	
Hawaii						
Idaho						
Nevada						
Oregon						
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 14--Peaches: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut	197		208		220	
Maine						
Massachusetts	99		104		110	
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware	99		104		110	
District of Columbia						
Maryland	789		832		878	
New Jersey	3,253		3,431		3,622	
New York	493		520		549	
Pennsylvania	3,254		3,431		3,622	
Virginia	1,085		1,143		1,207	
West Virginia	690		728		768	
Southeast:						
Alabama	493		520		549	
Florida						
Georgia	3,845		4,055		4,280	
Kentucky	197		208		220	
Mississippi	99		104		110	
North Carolina	1,479		1,560		1,646	
South Carolina	10,353		10,918		11,524	
Tennessee	296		312		329	
Midwest:						
Illinois	493		520		549	
Indiana	99		104		110	
Michigan	2,069		2,183		2,305	
Minnesota						
Ohio	99		104		110	
Wisconsin						
Mountain Plains:						
Colorado	394		416		439	
Iowa						
Kansas	296		312		329	
Missouri	493		520		549	
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah	592		624		659	
Wyoming						

See footnote at end of table.

Continued--

Appendix table 14--Peaches: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
			1,000 pounds			
Southwest:						
Arkansas	1,380		1,456		1,536	
Louisiana	296		312		329	
New Mexico						
Oklahoma	295		312		329	
Texas	1,479		1,560		1,646	
Western:						
Alaska						
Arizona						
California	61,426		64,780		68,377	
Hawaii						
Idaho	394		416		439	
Nevada						
Oregon	592		624		658+	
Washington	1,479		1,560		1,646	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 15--Pears: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut	55		55		63	
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey						
New York	629		630		729	
Pennsylvania	137		137		159	
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois						
Indiana						
Michigan	465		465		539	
Minnesota						
Ohio						
Wisconsin						
Mountain Plains:						
Colorado	136		137		159	
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah	136		137		159	
Wyoming						

See footnote at end of table.

Continued--

Appendix table 15--Pears: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma						
Texas						
Western:						
Alaska						
Arizona						
California	11,267		11,283		13,064	
Hawaii						
Idaho	27		27		32	
Nevada						
Oregon	5,989		5,998		6,944	
Washington	8,505		8,517		9,861	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 16--Pineapple: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey						
New York						
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois						
Indiana						
Michigan						
Minnesota						
Ohio						
Wisconsin						
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 16--Pineapple: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma						
Texas						
Western:						
Alaska						
Arizona						
California						
Hawaii	21,519		24,607		27,921	
Idaho						
Nevada						
Oregon						
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 17--Plums: Regional net farm commodity provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey						
New York						
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois						
Indiana						
Michigan		76		534		1,189
Minnesota						
Ohio						
Wisconsin						
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 17--Plums: Regional net farm commodity provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma						
Texas						
Western:						
Alaska						
Arizona						
California						
Hawaii						
Idaho		28		195		433
Nevada						
Oregon		84		589		1,312
Washington		67		468		1,041

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 18--Strawberries: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Postive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey	15		17		19	
New York	29		34		39	
Pennsylvania	15		17		19	
Virginia						
West Virginia						
Southeast:						
Alabama	114		131		150	
Florida						
Georgia						
Kentucky						
Mississippi						
North Carolina	17		20		23	
South Carolina						
Tennessee						
Midwest:						
Illinois						
Indiana						
Michigan	67		77		89	
Minnesota						
Ohio	35		40		46	
Wisconsin	15		17		19	
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 18--Strawberries: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas	20		24		27	
Louisiana	23		27		32	
New Mexico						
Oklahoma						
Texas						
Western:						
Alaska						
Arizona						
California	2,323		2,687		3,077	
Hawaii						
Idaho						
Nevada						
Oregon	154		178		204	
Washington	84		98		112	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 19--Watermelons: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware	18		27		37	
District of Columbia						
Maryland	25		38		52	
New Jersey						
New York						
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama	55		83		113	
Florida	494		748		1,021	
Georgia	145		220		300	
Kentucky						
Mississippi	56		85		116	
North Carolina	24		36		49	
South Carolina	75		114		156	
Tennessee						
Midwest:						
Illinois						
Indiana	44		67		92	
Michigan						
Minnesota						
Ohio						
Wisconsin						
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri	28		43		58	
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 19--Watermelons: Retional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas	18		27		37	
Louisiana						
New Mexico						
Oklahoma	36		54		74	
Texas	316		478		652	
Western:						
Alaska						
Arizona	34		52		70	
California	114		173		236	
Hawaii						
Idaho						
Nevada						
Oregon						
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 20--Barley: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware	2/		1		1	
District of Columbia						
Maryland	1		1		2	
New Jersey	2/		3/		4/	
New York	2/		3/			
Pennsylvania	2		2		2	
Virginia	1		2		2	
West Virginia	2/		3/		4/	
Southeast:						
Alabama						
Florida						
Georgia						
Kentucky	2/		3/		1	
Mississippi						
North Carolina	1		1		1	
South Carolina	2/		2			
Tennessee	2/		3/			
Midwest:						
Illinois	2/		3/			
Indiana						
Michigan	2/		3/		4/	
Minnesota	32		37		40	
Ohio	2/		3/			
Wisconsin	2/		3/		4/	
Mountain Plains:						
Colorado	9		11		12	
Iowa						
Kansas	1		1		1	
Missouri						
Montana	31		36		39	
Nebraska	2/		3/			
North Dakota	64		74		80	
South Dakota	8		9		10	
Utah	2		2		3	
Wyoming	3		4		4	

See footnotes at end of table.

Continued---

Appendix table 20--Barley: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Lousiana						
New Mexico	1		1		1	
Oklahoma	1		1		1	
Texas	2/		3/		1	
Western:						
Alaska						
Arizona	2		2		2	
California	29		34		37	
Hawaii						
Idaho	26		30		32	
Nevada	2/		3/		4/	
Oregon	6		7		7	
Washington	16		19		20	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

2/ None of these States had as much as 1000 pounds. In aggregate they totaled: Context I, 5;

3/ Context II 2;

4/ Context III 2.

Appendix table 21--Field corn sold: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware	74		85		96	
District of Columbia						
Maryland	223		254		288	
New Jersey	25		28		32	
New York	124		141		160	
Pennsylvania	248		283		320	
Virginia	124		141		160	
West Virginia	3		4		6	
Southeast:						
Alabama	50		57		64	
Florida	74		85		96	
Georgia	223		254		288	
Kentucky	396		452		512	
Mississippi	5		6		6	
North Carolina	471		537		608	
South Carolina	124		141		160	
Tennessee	99		113		128	
Midwest:						
Illinois	4,781		5,455		6,178	
Indiana	2,452		2,798		3,169	
Michigan	718		820		928	
Minnesota	2,056		2,346		2,657	
Ohio	1,362		1,555		1,760	
Wisconsin	619		707		800	
Mountain Plains:						
Colorado	372		424		480	
Iowa	4,657		5,314		6,018	
Kansas	619		707		800	
Missouri	495		565		640	
Montana	4		4		6	
Nebraska	2,799		3,194		3,617	
North Dakota	74		85		96	
South Dakota	446		509		576	
Utah	3		4		5	
Wyoming	4		4		5	

See footnote at end of table.

Continued-

Appendix table 21--Field corn sold: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas	1		1		2	
Louisiana	2		2		3	
New Mexico	25		28		32	
Oklahoma	25		28		32	
Texas	718		820		928	
Western:						
Alaska						
Arizona	25		28		32	
California	173		198		224	
Hawaii						
Idaho	25		28		32	
Nevada						
Oregon	2		3		3	
Washington	50		57		64	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 22--Oats: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine		3		1		1
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland		2/		2/		2/
New Jersey						
New York		10		4		3
Pennsylvania		7		3		2
Virginia		1		2/		2/
West Virginia						
Southeast:						
Alabama		1		2/		2/
Florida						
Georgia		3		1		1
Kentucky						
Mississippi						
North Carolina		3		1		1
South Carolina		3		1		1
Tennessee		2/		2/		2/
Midwest:						
Illinois		14		6		5
Indiana		6		3		2
Michigan		20		9		7
Minnesota		104		43		34
Ohio		20		8		6
Wisconsin		21		9		7
Mountain Plains:						
Colorado		1		2/		2/
Iowa		42		17		14
Kansas		3		1		1
Missouri		1		1		1
Montana		5		2		2
Nebraska		23		10		8
North Dakota		40		17		13
South Dakota		92		38		30
Utah		2/		2/		2/
Wyoming		1		1		2/

See footnotes at end of table.

Continued--

Appendix table 22--Oats: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas	5			2	2	
Louisiana						
New Mexico						
Oklahoma	3			1	1	
Texas	13			6	4	
Western:						
Alaska						
Arizona						
California	8			3	3	
Hawaii						
Idaho	2			1	2/	
Nevada						
Oregon	6			3	2	
Washington	1			1	2/	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.
2/ Less than 100 pounds.

Appendix table 23--Peanuts: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey						
New York						
Pennsylvania						
Virginia		15,272		10,037		4,424
West Virginia						
Southeast:						
Alabama		28,804		18,931		8,343
Florida		8,892		5,845		2,576
Georgia		80,998		53,237		23,462
Kentucky						
Mississippi		773		508		224
North Carolina		22,811		14,993		6,608
South Carolina		1,740		1,144		504
Tennessee						
Midwest:						
Illinois						
Indiana						
Michigan						
Minnesota						
Ohio						
Wisconsin						
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 23--Peanuts: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico		1,160		762		336
Oklahoma		11,986		7,877		3,472
Texas		20,878		13,722		6,047
Western:						
Alaska						
Arizona						
California						
Hawaii						
Idaho						
Nevada						
Oregon						
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 24--Rice: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey						
New York						
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia						
Kentucky						
Mississippi	704		865		1,040	
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois						
Indiana						
Michigan						
Minnesota						
Ohio						
Wisconsin						
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri	99		121		146	
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 24--Rice: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas	4,585		5,632		6.767	
Louisiana	2,076		2,550		3,064	
New Mexico						
Oklahoma						
Texas	2,595		3,188		3,830	
Western:						
Alaska						
Arizona						
California	2,299		2,823		3,392	
Hawaii						
Idaho						
Nevada						
Oregon						
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 25--Rye: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware	165		119		69	
District of Columbia						
Maryland	372		267		155	
New Jersey	454		326		189	
New York	413		297		172	
Pennsylvania	372		267		155	
Virginia	578		415		241	
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia	3,137		2,225		1,308	
Kentucky	165		119		69	
Mississippi						
North Carolina	661		475		275	
South Carolina	1,239		890		516	
Tennessee	83		59		34	
Midwest:						
Illinois	702		504		292	
Indiana	372		267		155	
Michigan	784		564		327	
Minnesota	5,202		3,739		2,168	
Ohio	372		267		155	
Wisconsin	578		415		241	
Mountain Plains:						
Colorado	165		119		69	
Iowa	206		148		86	
Kansas	372		267		155	
Missouri	330		237		138	
Montana						
Nebraska	1,899		1,365		791	
North Dakota	8,919		6,408		3,716	
South Dakota	11,561		8,306		4,816	
Utah						
Wyoming	124		89		52	

See footnote at end of table.

Continued--

Appendix table 25--Rye: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico		991		712		413
Oklahoma		661		475		275
Texas						
Western:						
Alaska						
Arizona						
California						
Hawaii						
Idaho						
Nevada		289		208		120
Oregon		124		89		52
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 26--Soy based products 1/: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 2/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware	30		31		32	
District of Columbia						
Maryland	51		52		53	
New Jersey	30		31		32	
New York						
Pennsylvania	10		10		11	
Virginia	61		62		63	
West Virginia						
Southeast:						
Alabama	223		228		233	
Florida	51		52		53	
Georgia	142		145		148	
Kentucky	233		238		244	
Mississippi	445		455		466	
North Carolina	192		197		201	
South Carolina	162		166		170	
Tennessee	304		310		318	
Midwest:						
Illinois	1,802		1,842		1,886	
Indiana	800		818		837	
Michigan	111		114		116	
Minnesota	779		797		816	
Ohio	688		704		720	
Wisconsin	40		41		42	
Mountain Plains:						
Colorado						
Iowa	1,518		1,552		1,589	
Kansas	152		155		159	
Missouri	850		869		890	
Montana						
Nebraska	233		238		244	
North Dakota	20		21		21	
South Dakota	61		62		63	
Utah						
Wyoming						

See footnotes at end of table.

Continued--

Appendix table 26--Soy based products 1/: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 2/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas	607		621		636	
Louisiana	385		393		403	
New Mexico						
Oklahoma	30		31		32	
Texas	111		114		116	
Western:						
Alaska						
Arizona						
California						
Hawaii						
Idaho						
Nevada						
Oregon						
Washington						

1/ Includes TVP plus cream substitutes.

2/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 27--Wheat: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware		31		97		209
District of Columbia						
Maryland		63		193		419
New Jersey		31		97		209
New York		63		193		419
Pennsylvania		126		387		838
Virginia		94		290		629
West Virginia						
Southeast:						
Alabama		32		97		209
Florida						
Georgia		63		193		419
Kentucky		126		387		838
Mississippi		63		193		419
North Carolina		94		290		629
South Carolina		32		97		209
Tennessee		157		484		1,048
Midwest:						
Illinois		850		2,611		5,657
Indiana		724		2,224		4,819
Michigan		409		1,257		2,724
Minnesota		1,856		5,706		12,361
Ohio		944		2,901		6,285
Wisconsin		32		97		209
Mountain Plains:						
Colorado		944		2,901		6,285
Iowa		63		193		419
Kansas		5,349		16,441		35,617
Missouri		787		2,418		5,238
Montana		2,265		6,963		15,085
Nebraska		1,510		4,642		10,056+
North Dakota		4,248		13,056		28,284
South Dakota		1,133		3,482		7,542
Utah		94		290		629
Wyoming		94		290		629

See footnote at end of table.

Continued--

Appendix table 27--Wheat: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas		315		967		2,095
Louisiana						
New Mexico		126		387		838
Oklahoma		2,643		8,124		17,599
Texas		1,416		4,352		9,428
Western:						
Alaska						
Arizona		157		484		1,047
California		724		2,224		4,819
Hawaii						
Idaho		1,038		3,192		6,914
Nevada		31		97		209
Oregon		818		2,515		5,447
Washington		1,919		5,899		12,780

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 28--Beets: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey						
New York	2,386		2,445		2,508	
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois 2/	27		27		28	
Indiana 2/	4		5		5	
Michigan 2/	170		174		178	
Minnesota						
Ohio 2/	71		72		74	
Wisconsin	3,636		3,726		3,822	
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 28--Beets: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma						
Texas 2/	736		754		774	
Western:						
Alaska						
Arizona						
California 2/	337		346		354	
Hawaii						
Idaho						
Nevada						
Oregon 2/	860		881		904	
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

2/ Commercial production figures for these States were reported as an aggregate. The net beet support (000 lbs.) given in aggregate is: Context I 2205, Context II 2259, Context III 2317.

Appendix table 29--Broccoli: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey						
New York						
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois						
Indiana						
Michigan						
Minnesota						
Ohio						
Wisconsin						
Mountain Plains:						
Colrado						
Iowa						
Knasas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnotes at end of table.

Continued--

Appendix table 29--Broccoli: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma						
Texas 2/	175		183		192	
Western:						
Alaska						
Arizona 2/	31		33		34	
California	7,620		7,973		8,351	
Hawaii						
Idaho						
Nevada						
Oregon						
Washington	112		116		122	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

2/ Production data combined Argizona and Texas. (Distributed according to each State's share of their combined acreage last reported in Census of Agriculture.

Appendix table 30--Cabbage: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts	588		614		641	
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland	368		384		400	
New Jersey	2,499		2,609		2,723	
New York	15,144		15,805		16,497	
Pennsylvania	1,691		1,765		1,842	
Virginia	1,176		1,228		1,281	
West Virginia						
Southeast:						
Alabama						
Florida	11,173		11,663		12,173	
Georgia	956		997		1,041	
Kentucky						
Mississippi						
North Carolina	2,941		3,069		3,203	
South Carolina	221		230		240	
Tennessee	588		614		641	
Midwest:						
Illinois	956		997		1,041	
Indiana	882		921		961	
Michigan	2,132		2,225		2,322	
Minnesota						
Ohio	3,235		3,376		3,524	
Wisconsin	5,954		6,215		6,487	
Mountain Plains:						
Colorado	1,250		1,304		1,361	
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 30--Cabbage: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma	13,894		14,501		15,136	
Texas						
Western:						
Alaska						
Arizona						
California	5,513		5,755		6,007	
Hawaii	441		460		480	
Idaho	230		239		250	
Nevada						
Oregon	873		912		951	
Washington	809		844		881	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 31--Carrots: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey	415		512		616	
New York	969		1,196		1,437	
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois	162		199		239	
Indiana						
Michigan	2,293		2,830		3,400	
Minnesota	904		1,116		1,341	
Ohio	263		325		390	
Wisconsin	2,681		3,308		3,974	
Mountain Plains:						
Colorado	388		478		575	
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 31--Carrots: Regional net farm commodity support provided by school feeding programs in SY 1977/78 --Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma						
Texas	4,587		5,659		6,799	
Western:						
Alaska						
Arizona	420		518		622	
California	14,826		18,294		21,978	
Hawaii						
Idaho						
Nevada						
Oregon	872		1,076		1,293	
Washington	3,521		4,344		5,219	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 32--Cauliflower: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey						
New York		73		14	51	
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois						
Indiana						
Michigan		12		2	8	
Minnesota						
Ohio						
Wisconsin						
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 32--Cauliflower: Regional net farm commodity support provided by school feeding programs in SY 1977/78-- Continued

Region	Net Support 1/ Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
			1,000 pounds			
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma		10		2	7	
Texas						
Western:						
Alaska						
Arizona		15		3	10	
California		677		125	466	
Hawaii						
Idaho						
Nevada						
Oregon		66		12	45	
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. is no production, both are blank.

Appendix table 33--Celery: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey						
New York	197		262		322	
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida	2,781		3,705		4,555	
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois						
Indiana						
Michigan	763		1,017		1,250	
Minnesota						
Ohio	99		131		161	
Wisconsin						
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 33--Celery: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma						
Texas						
Western:						
Alaska						
Arizona						
California	8,418		11,215		13,787	
Hawaii						
Idaho						
Nevada						
Oregon						
Washington	49		66		81	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 34--Sweet corn: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware	479		494		510	
District of Columbia						
Maryland	5,032		5,188		5,355	
New Jersey						
New York	9,825		10,129		10,455	
Pennsylvania	1,677		1,729		1,785	
Virginia	586		604		623	
West Virginia	108		111		115	
Southeast:						
Alabama						
Florida						
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois						
Indiana	23,484		24,211		24,990	
Michigan	2,243		2,312		2,387	
Minnesota	64,223		66,209		68,341	
Ohio						
Wisconsin	54,877		56,574		58,395	
Mountain Plains:						
Colorado						
Iowa	4,074		4,200		4,335	
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming	359		371		383	

See footnote at end of table.

Continued--

Appendix table 34--Sweet corn: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma						
Texas	298		308		317	
Western:						
Alaska						
Arizona						
California						
Hawaii						
Idaho	14,858		15,317		15,810	
Nevada						
Oregon	30,913		31,870		32,895	
Washington	26,600		27,423		28,305	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 35--Cucumbers: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts		32		8		17
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware		31		8		16
District of Columbia						
Maryland		253		65		136
New Jersey		804		207		432
New York		122		32		66
Pennsulvania		11		3		6
Virginia		280		72		150
West Virginia						
Southeast:						
Alabama		70		18		38
Florida		978		253		526
Georgia		63		16		34
Kentucky		5		1		3
Mississippi		26		7		14
North Carolina		323		83		174
South Carolina		454		117		244
Tennessee						
Midwest:						
Illinois		753		194		405
Indiana		87		23		47
Michigan		1,189		307		639
Minnesota		5		1		3
Ohio		646		167		348
Wisconsin		559		144		301
Mountain Plains:						
Colorado		166		43		89
Iowa						
Kansas						
Missouri						
Montana						
Nebraska		1				1
North Dakota						
South Dakota		1				
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 35--Cucumbers: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas		15		4	8	
Louisiana		6		2	3	
New Mexico						
Oklahoma		3		1	2	
Texas		830		214	447	
Western:						
Alaska		12		3	7	
Arizona		909		234	489	
California		17		5	9	
Hawaii						
Idaho						
Nevada		33		8	18	
Oregon		52		13	28	
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 36--Dry edible beans: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey						
New York	207		403		612	
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois	7		13		20	
Indiana	3		5		8	
Michigan	3,193		6,203		9,432	
Minnesota	264		512		779	
Ohio						
Wisconsin						
Mountain Plains:						
Colorado	735		1,427		2,170	
Iowa						
Kansas	94		183		278	
Missroui						
Montana	57		110		167	
Nebraska	979		1,903		2,894	
North Dakota	622		1,208		1,836	
South Dakota						
Utah	9		18		28	
Wyoming	207		403		612	

See footnote at end of table.

Continued

Appendix table 36--Dry edible beans: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma						
Texas						
Western:						
Alaska						
Arizona						
California	1,601		3,111		4,730	
Hawaii						
Idaho	1,224		2,379		3,617	
Nevada						
Oregon						
Washington	217		421		640	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 37--Green (snap) beans: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine	528		540		553	
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware	1,239		1.268		1,299	
District of Columbia						
Maryland	1,716		1,756		1,798	
New Jersey	1,239		1,268		1,299	
New York	13,062		13,362		13,685	
Pennsulvania	1,430		1,463		1,498	
Virginia	1,430		1,463		1,498	
West Virginia						
Southeast:						
Alabama	191		195		200	
Florida	6,674		6,827		6,992	
Georgia	763		780		799	
Kentucky	95		98		100	
Mississippi						
North Carolina	1,430		1,463		1,498	
South Carolina	572		585		599	
Tennessee	3,051		3,121		3,196	
Midwest:						
Illinois	2,479		2,536		2,597	
Indiana	2,099		2,147		2,199	
Michigan	4,767		4,877		4,994	
Minnesota	1,853		1,895		1,941	
Ohio	191		195		200	
Wisconsin	21,261		21,750		22,275	
Mountain Plains:						
Colorado	572		585		599	
Iowa						
Kansas						
Missouri	610		624		639	
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah	797		816		835	
Wyoming						

See footnote at end of table.

Continued--

Appendix table 37--Green (snap) beans: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Wouthwest:						
Arkansas						
Louisiana	858		878		899	
New Mexico						
Oklahoma	286		293		300	
Texas	2,169		2,219		2,273	
Western:						
Alaska						
Arizona						
California	3,623		3,706		3,796	
Hawaii	95		98		100	
Idaho	1,513		1,548		1,585	
Nevada						
Oregon	16,589		16,971		17,380	
Washington	2,148		2,207		2,261	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 38--Green peas: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine	849		894		899	
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware	1,359		1,398		1,439	
District of Columbia						
Maryland	963		990		1,019	
New Jersey						
New York	906		932		959	
Pennsylvania	113		117		120	
Virginia	141		146		150	
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois	5,047		5,190		5,343	
Indiana						
Michigan	545		560		577	
Minnesota	10,929		11,239		11,570	
Ohio	106		109		113	
Wisconsin	15,175		15,607		16,066	
Mountain Plains:						
Colorado	57		58		60	
Iowa	156		160		165	
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah	234		240		247	
Wyoming						

See footnote at end of table.

Continued--

Appendix table 38--Green peas: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma						
Texas						
Western:						
Alaska						
Arizona						
California	1,302		1,339		1,379	
Hawaii						
Idaho	1,302		1,339		1,379	
Nevada						
Oregon	4,077		4,193		4,316	
Washington	13,363		13,743		14,148	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 39--Green peppers: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey		1,164		645		88
New York						
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida		4,617		2,558		349
Georgia						
Kentucky		465		258		35
Mississippi						
North Carolina		621		344		47
South Carolina						
Tennessee						
Midwest:						
Illinois						
Indiana						
Michigan		272		150		20
Minnesota						
Ohio		272		150		21
Wisconsin						
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 39--Green peppers: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana		129		72		10
New Mexico						
Oklahoma						
Texas		1,694		938		128
Western:						
Alaska						
Arizona						
California		3,699		2,049		280
Hawaii						
Idaho						
Nevada						
Oregon						
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 40--Lettuce: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey		264		36	209	
New York		323		44	255	
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida		882		120	697	
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois						
Indiana						
Michigan		118		16	93	
Minnesota						
Ohio		59		8	46	
Wisconsin		147		20	116	
Mountain Plains:						
Colorado		558		76	441	
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 40--Lettuce: Regional net farm commodity support provided by school feeding programs in SY 1977/78 --Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico		441		60	348	
Oklahoma						
Texas		500		68	395	
Western:						
Alaska						
Arizona		4,173		569	3,297	
California		21,746		2,964	17,179	
Hawaii		59		8	46	
Idaho						
Nevada						
Oregon		117		16	93	
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 41--Lima beans: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware	332		568		603	
District of Columbia						
Maryland	110		188		199	
New Jersey	219		375		397	
New York	13		22		23	
Pennsylvania	2		4		4	
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois	272		465		493	
Indiana						
Michigan						
Minnesota	54		93		98	
Ohio	13		23		24	
Wisconsin	264		452		480	
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 41--Lima beans: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas	6		10		10	
Lousiana						
New Mexico						
Oklahoma						
Texas						
Western:						
Alaska						
Arizona						
California	1,816		3,107		3,294	
Hawaii						
Idaho	65		111		117	
Nevada						
Oregon	1		2		3	
Washington	58		98		105	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 42--Onions: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey		212		115		11
New York		8,204		4,455		436
Pennsylvania						
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia						
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois						
Indiana						
Michigan		4,527		2,458		240
Minnesota		425		230		22
Ohio		424		231		23
Wisconsin		707		384		38
Mountain Plains:						
Colorado		4,739		2,573		252
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming		1,344		730		71

See footnote at end of table.

Continued--

Appendix table 42--Onions: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positve	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico	2,193		1,191		116	
Oklahoma						
Texas	9,477		5,146		504	
Western:						
Alaska						
Arizona	1,344		730		71	
California	20,369		11,060		1,082	
Hawaii						
Idaho	4,880		2,650		259	
Nevada						
Oregon	8,558		4,647		455	
Washington	3,324		1,805		177	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 43--Pumpkin and squash: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine		25		20		68
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey						
New York		116		91		313
Pennsylvania		65		51		176
Virginia						
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia		45		35		121
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee						
Midwest:						
Illinois		489		385		1,324
Indiana		383		301		1,036
Michigan		1,862		1,466		5,038
Minnesota						
Ohio						
Wisconsin		36		29		98
Mountain Plains:						
Colorado		24		19		64
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 43--Pumkin and Squash: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico						
Oklahoma						
Texas						
Western:						
Alaska						
Arizona						
California		297		234		805
Hawaii						
Idaho						
Nevada						
Oregon		50		39		135
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 44--Spinach: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland	220		226		231	
New Jersey	335		343		351	
New York						
Pennsulvania						
Virginia	97		99		102	
West Virginia						
Southeast:						
Alabama						
Florida						
Georgia						
Kentucky						
Mississippi	8		8		8	
North Carolina						
South Carolina						
Tennessee	3,043		3,116		3,195	
Midwest:						
Illinois						
Indiana						
Michgan						
Minnesota						
Ohio						
Wisconsin						
Mountain Plains:						
Colorado	282		288		296	
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 44--Spinach: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas	968		992		1,017	
Louisiana						
New Mexico	933		956		980	
Oklahoma	951		974		998	
Texas						
Western:						
Alaska						
Arizona						
California	9,807		10,042		10,296	
Hawaii						
Idaho						
Nevada						
Oregon						
Washington	963		987		1,012	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 45--Sweetpotatoes: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland	426		455		485	
New Jersey	474		505		539	
New York						
Pennsylvania						
Virginia	1,398		1,490		1,591	
West Virginia						
Southeast:						
Alabama	900		960		1,025	
Florida						
Georgia	1,042		1,112		1,186	
Kentucky						
Mississippi	1,327		1,415		1,510	
North Carolina	8,694		9,273		9,894	
South Carolina	426		455		485	
Tennessee	497		530		566	
Midwest:						
Illinois						
Indiana						
Michigan						
Minnesota						
Ohio						
Wisconsin						
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 45--Sweetpotatoes: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas	237		253		270	
Lousiana	4,596		4,902		5,230	
New Mexico						
Oklahoma	1,398		1,491		1,591	
Texas						
Western:						
Alaska						
Arizona						
California	2,274		2,426		2,588	
Hawaii						
Idaho						
Nevada						
Oregon						
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 46--Tomatoes: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine						
Massachusetts	14		118		229	
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware	25		208		403	
District of Columbia						
Maryland	100		828		1,607	
New Jersey	228		1,894		3,674	
New York	29		237		459	
Pennsylvania	199		1,657		3,214	
Virginia	85		710		1,378	
West Virginia	5		43		84	
Southeast:						
Alabama	43		355		689	
Florida	712		5,918		11,480	
Georgia	14		118		229	
Kentucky	15		128		248	
Mississippi						
North Carolina	28		237		459	
South Carolina	71		592		1,148	
Tennessee	28		237		459	
Midwest:						
Illinois	74		620		1,203	
Indiana	342		2,841		5,510	
Michigan	157		1,302		2,526	
Minnesota						
Ohio	726		6,036		11,709	
Wisconsin						
Mountain Plains:						
Colorado	14		118		230	
Iowa	28		229		445	
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah	8		66		128	
Wyoming						

See footnote at end of table.

Continued--

Appendix table 46--Tomatoes: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas	28		237		459	
Louisiana	10		80		155	
New Mexico	14		118		230	
Oklahoma	7		56		107	
Texas	85		710		1,378	
Western:						
Alaska						
Arizona						
California	11,128		92,554		179,546	
Hawaii						
Idaho						
Nevada						
Oregon						
Washington	13		109		212	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 47--Turnips: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut	2/		2		4	
Maine						
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware						
District of Columbia						
Maryland						
New Jersey	1		29		58	
New York	1		17		34	
Pennsulvania	11		274		557	
Virginia						
West Virginia						
Southeast:						
Alabama	12		315		641	
Florida						
Georgia	15		381		774	
Kentucky						
Mississippi						
North Carolina						
South Carolina						
Tennessee	35		905		1,837	
Midwest:						
Illinois						
Indiana						
Michigan						
Minnesota						
Ohio						
Wisconsin						
Mountain Plains:						
Colorado						
Iowa						
Kansas						
Missouri						
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnotes at end of table.

Continued--

Appendix table 47--Turnips: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas	68		1,721		3,494	
Louisiana						
New Mexico						
Oklahoma						
Texas	8		197		400	
Western:						
Alaska						
Arizona						
California						
Hawaii						
Idaho						
Nevada						
Oregon						
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.
2/ Less than 100 pounds.

Appendix table 48--Yellow (wax) beans: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine	14		14		15	
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware	32		34		36	
District of Columbia						
Maryland	45		47		49	
New Jersey	32		34		36	
New York	342		357		374	
Pennsylvania	37		39		41	
Virginia	37		39		41	
West Virginia						
Southeast:						
Alabama	5		5		6	
Florida	175		183		191	
Georgia	20		21		22	
Kentucky	2		3		3	
Mississippi						
North Carolina	37		39		41	
South Carolina	15		16		16	
Tennessee	80		83		87	
Midwest:						
Illinois	65		68		71	
Indiana	55		58		60	
Michigan	125		130		137	
Minnesota	49		51		53	
Ohio	5		5		6	
Wisconsin	556		582		609	
Mountain Plains:						
Colorado	15		16		16	
Iowa						
Kansas						
Missouri	16		17		17	
Montana						
Nebraska						
North Dakota						
South Dakota						
Utah						
Wyoming	21		22		23	

See footnote at end of table.

Continued--

Appendix table 48--Yellow (wax) beans: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/ Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
			1,000 pounds			
Southwest:						
Arkansas	22		23		25	
Louisiana						
New Mexico	7		8		8	
Oklahoma	57		59		62	
Texas						
Western:						
Alaska						
Arizona						
California	95		99		104	
Hawaii	2		3		3	
Idaho	40		41		43	
Nevada						
Oregon	434		454		475	
Washington	56		59		62	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 49--White potatoes: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut	130		225		326	
Maine	9,885		17,069		24,773	
Massachusetts	260		449		652	
New Hampshire						
Rhode Island	390		674		978	
Vermont	130		225		325	
Mid-Atlantic:						
Delaware	390		674		978	
District of Columbia						
Maryland	130		225		326	
New Jersey	780		1,348		1,956	
New York	4,552		7,861		11,409	
Pennsylvania	2,341		4,043		5,867	
Virginia	1,171		2,021		2,934	
West Virginia						
Southeast:						
Alabama	780		1,348		1,956	
Florida	2,211		3,818		5,541	
Georgia						
Kentucky						
Mississippi						
North Carolina	911		1,572		2,282	
South Carolina						
Tennessee	130		225		325	
Midwest:						
Illinois	130		225		325	
Indiana	520		898		1,304	
Michigan	3,642		6,287		9,127	
Minnesota	5,853		10,106		14,668	
Ohio	1,041		1,797		2,608	
Wisconsin	6,373		11,005		15,972	
Mountain Plains:						
Colorado	4,163		7,187		10,431	
Iowa	130		224		325	
Kansas						
Missouri						
Montana	780		1,348		1,956	
Nebraska	650		1,123		1,630	
North Dakota	7,934		13,699		19,883	
South Dakota	390		674		978	
Utah	390		674		978	
Wyoming	520		898		1,304	

See footnote at end of table.

Continued--

Appendix table 49--White potatoes: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas						
Louisiana						
New Mexico	260		449		652	
Oklahoma						
Texas	1,301		2,246		3,260	
Western:						
Alaska	650		1,123		1,630	
Arizona	7,284		12,577		18,254	
California						
Hawaii	33,687		58,168		84,423	
Idaho	1,821		3,144		4,563	
Nevada	9,885		17,069		24,773	
Oregon	18,469		31,890		46,286	
Washington						

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 50--Milk: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut	4,324		8,621		13,223	
Maine	4,324		8,621		13,223	
Massachusetts	4,324		8,621		13,223	
New Hampshire	2,595		5,172		7,934	
Rhode Island	432		862		1,322	
Vermont	14,702		29,311		44,957	
Mid-Atlantic:						
Delaware	865		1,724		2,645	
District of Columbia						
Maryland	10,378		20,690		31,735	
New Jersey	3,459		6,897		10,578	
New York	70,051		139,657		214,209	
Pennsylvania	53,619		106,898		163,962	
Virginia	12,972		25,862		39,668	
West Virginia	2,595		5,172		7,934	
Southeast:						
Alabama	4,324		8,621		13,223	
Florida	12,972		25,862		39,668	
Georgia	8,648		17,242		26,446	
Kentucky	16,432		32,759		50,246	
Mississippi	6,054		12,069		18,512	
North Carolina	10,378		20,690		31,735	
South Carolina	3,459		6,897		10,578	
Tennessee	14,702		29,311		44,957	
Midwest:						
Illinois	16,432		32,759		50,247	
Indiana	14,702		29,311		44,957	
Michigan	32,864		65,518		100,493	
Minnesota	63,133		125,864		193,052	
Ohio	29,404		58,621		89,915	
Wisconsin	177,290		353,432		542,133	
Mountain Plains:						
Colorado	6,054		12,069		18,512	
Iowa	27,675		55,173		84,626	
Kansas	9,513		18,966		29,090	
Missouri	19,026		37,932		58,180	
Montana	1,730		3,448		5,289	
Nebraska	8,648		17,242		26,446	
North Dakota	6,054		12,069		18,512	
South Dakota	11,243		22,414		34,379	
Utah	6,054		12,069		18,512	
Wyoming	865		1,724		2,645	

See footnote at end of table.

Continued--

Appendix table 50--Milk: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
			1,000 pounds			
Southwest:						
Arkansas	5,189		10,345		15,867	
Louisiana	6.919		13,793		21,156	
New Mexico	2,594		5,172		7,934	
Oklahoma	7,733		15,517		23,801	
Texas	23,350		46,552		71,403	
Western:						
Alaska	432		862		1,322	
Arizona	6,045		12,069		18,512	
California	81,294		162,071		248,588	
Hawaii	865		1,724		2,645	
Idaho	11,243		22,414		34,379	
Nevada	1,730		3,448		5,289	
Oregon	6.919		13,793		21,156	
Washington	18,161		36,207		55,536	

1/ If support is positive, the negative column is blank. If it is negative, the positive column if blank. If there is no production, both are blank.

Appendix table 51--Chicken: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut						
Maine	3,128		3,777		4,491	
Massachusetts						
New Hampshire						
Rhode Island						
Vermont						
Mid-Atlantic:						
Delaware	5,586		6,746		8,021	
District of Columbia						
Maryland	7,248		8,754		10,407	
New Jersey						
New York						
Pennsylvania	3,197		3,861		4,590+	
Virginia	3,266		3,945		4,690	
West Virginia	427		516		613	
Southeast:						
Alabama	13,723		16,573		19,704	
Florida	2,620		3,164		3,762	
Georgia	16,297		19,682		23,400	
Kentucky	104		125		149	
Mississippi	8,633		10,426		12,396	
North Carolina	11,818		14,273		16,970	
South Carolina	1,120		1,352		1,608	
Tennessee	1,489		1,798		2,138	
Midwest:						
Illinois						
Indiana	450		544		646	
Michigan	46		56		66	
Minnesota	542		655		779	
Ohio	681		822		978	
Wisconsin	381		460		547	
Mountail Plains:						
Colorado						
Iowa	254		307		365	
Kansas						
Missouri	773		934		1,110	
Montana						
Nebraska	58		70		83	
North Dakota						
South Dakota						
Utah						
Wyoming						

See footnote at end of table.

Continued--

Appendix table 51--Chicken: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas	18,143		21,912		26,051	
Louisiana	2,239		2,704		3,215	
New Mexico						
Oklahoma	1,027		1,241		1,475	
Texas	6,394		7,722		9,181	
Western:						
Alaska						
Arizona						
California	4,570		5,520		6,564	
Hawaii	69		84		99	
Idaho						
Nevada						
Oregon	542		655		779	
Washington	589		711		845	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

Appendix table 52--Turkeys: Regional net farm commodity support provided by school feeding programs in SY 1977/78

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
New England:						
Connecticut	7		14		22	
Maine						
Massachusetts	26		53		82	
New Hampshire	5		10		15	
Rhode Island	2		5		7	
Vermont	2		5		7	
Mid-Atlantic:						
Delaware	23		42		99	
District of Columbia						
Maryland	17		34		52	
New Jersey	12		24		37	
New York	29		58		89	
Pennsylvania	562		1,125		1,655	
Virginia	1,298		2,598		3,993	
West Virginia	309		618		950	
Southeast:						
Alabama	1		2		4	
Florida					1	
Georgia	372		744		1,143	
Kentucky	1		2		5	
Mississippi						
North Carolina	2,931		5,868		9,017	
South	533		1,067		1,640	
Tennessee						
Midwest:						
Illinois	80		159		245	
Indiana	782		1,565		2,405	
Michigan	273		546		839	
Minnesota	3,457		6,921		10,635	
Ohio	584		1,169		1,796	
Wisconsin	1,021		2,043		3,139	
Mountain Plains:						
Colorado	827		1,657		2,546	
Iowa	1,216		2,434		3,741	
Kansas	26		53		82	
Missouri	1,831		3,666		5,633	
Montana	1		1		3	
Nebraska	89		179		275	
North Dakota	123		246		379	
South Dakota	181		362		557	
Utah	579		1,159		1,781	
Wyoming						

See footnote at end of table.

Continued--

Appendix table 52--Turkeys: Regional net farm commodity support provided by school feeding programs in SY 1977/78--Continued

Region	Net Support 1/					
	Context I		Context II		Context III	
	Positive	Negative	Positive	Negative	Positive	Negative
	1,000 pounds					
Southwest:						
Arkansas	2,123		4,250		6,531	
Louisiana						
New Mexico			1		2	
Oklahoma	205		411		631	
Texas	1,320		2,642		4,060	
Western:						
Alaska						
Arizona			1		2	
California	3,033		6,071		9,329	
Hawaii						
Idaho						
Nevada						
Oregon	224		449		690	
Washington	22		42		98	

1/ If support is positive, the negative column is blank. If it is negative, the positive column is blank. If there is no production, both are blank.

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